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ABSTRACT

An elaboration of the author's booklet entitled "First Steps Toward Economic Understanding," this primer is designed to help the reader develop a functional understanding of the economic process so that he can make wiser decisions on issues of social policy and on matters affecting his economic well-being. The document is not "economics in one lesson" but attempts to take some second steps toward economic understanding. Chapter I, "The Subject Matter of Economics," discusses such topics as economic institutions and basic problems facing every economic system. Chapter II, "Market Capitalism and Some Basic Principles of Economics," treats such topics as the circular flow of economic activity, the division of labor and economic interdependence, evolution of the industrial system, and the gross national product. Chapter III, "Ends and Means in the American Economy," discusses such subjects as economic goals of the American people, the government's role in our economic life, the role of labor unions, and human resources and the American work system. Chapter IV, "The American Economy: Trends and Problems," explores such topics as the knowledge explosion in technology and cybernation, the job market, unemployment, inflation, inequality and poverty, and international economic relations. (GC)

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PRIMER ON SOCIAL ECONOMICS

by

ROBERT L. DARCY
Professor of Economics
Colorado State University
Fort Collins, Colorado

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Robert L. Darcy

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PRIMER ON SOCIAL ECONOMICS

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ROBERT L. DARCY
Professor of Economics
Colorado State University
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PREFACE

This Primer, in a sense, is an elaboration of a little booklet I published several years ago entitled First Steps Toward Economic Understanding. I suggested there, based on experiences in the college classroom and in teacher workshops, that economic education should have as its objective the development of "functional economic literacy". This, in turn, required that students develop:

1-- A working knowledge of the structure of economics: the central ideas around which the discipline is organized;

2-- Command of three basic sets of analytical skills: statistics, history, and theory; and

3-- Ability to perform the five steps in economic reasoning: define the problem, identify goals, consider alternative solutions, analyze likely consequences of each alternative, and then choose the best course of action in light of stated goals.

There is not much sophisticated technique or neoclassical metaphysics in this Primer. Its purpose, to paraphrase Professor Knight, is not to provide pure entertainment or teach individuals how to take advantage of each other but to help the reader develop a functional understanding of the economic process so that he can make wiser decisions on issues of social policy and also on matters that affect his own personal economic wellbeing.

Primer on Social Economics is certainly not "Economics in One Lesson"; it is more of an attempt to take some second steps toward economic understanding.

* * *

I want to express my intellectual indebtedness to the teachers, colleagues, authors, speakers, and students who have given me viewpoints and ideas over the years, and to Professor Phillip Powell, Director of the Center for Economic Education, Henderson State College, Arkansas, for his continuing professional commitment, shared values, and collaboration.

* * *

Sections 3.6, 4.6, and 4.7 were added as new material in the second printing.

* * *

Fort Collins, Colorado
September 1971
(second printing)

Robert L. Darcy
Professor of Economics
Colorado State University

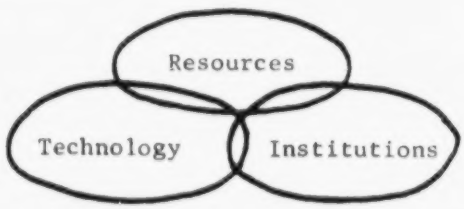
PRIMER ON SOCIAL ECONOMICS

CONTENTS

CHAPTER I	THE SUBJECT MATTER OF ECONOMICS	1
1.1	What Is Economics All About?	1
1.2	What Are the Three Basic Problems Facing Every Economic System?	3
1.3	Economic Institutions	6
	Summary	9
CHAPTER II	MARKET CAPITALISM AND SOME BASIC PRINCIPLES OF ECONOMICS	10
2.1	Capitalism: "The Anatomy of Free Enterprise"	10
2.2	The Circular Flow of Economic Activity	13
2.3	The Division of Labor and Economic Interdependence	17
2.4	Evolution of the Industrial System	20
2.5	"Gross National Product" and Some Fundamentals of Economic Statistics	22
2.6	Scarcity, Opportunity Costs, and Choice	27
2.7	"There Is No Such Thing as a Free Lunch	29
2.8	Models, Theories, and the Real World	34
2.9	What Are the Steps in Economic Reasoning?	37
	Summary	38
CHAPTER III	ENDS AND MEANS IN THE AMERICAN ECONOMY	39
3.1	Economic Goals of the American People	39
3.2	"The Business of America Is Business"	43
3.3	Government's Role in Our Economic Life	46
3.4	The Role of Labor Unions	50
3.5	Consumers of Abundance	55
3.6	Human Resources and the American Work System	58
	Summary	62
CHAPTER IV	THE AMERICAN ECONOMY: TRENDS AND PROBLEMS	64
4.1	The Knowledge Explosion: Technology, Automation, and Cybernation	64
4.2	Benefits and Burdens of Technological Change	67
4.3	Will There Be Enough Jobs for Everyone?	71
4.4	The Causes and Costs of Unemployment	74
4.5	Money, Inflation, and the "Tradeoff" Dilemma	78
4.6	Inequality, Low Incomes, and Poverty	81
4.7	International Economic Relations	90
4.8	Will Economic Growth Solve All Our Problems?	94
4.9	Values and A World-View for A Changing World	97
	Summary	101

I. THE SUBJECT MATTER OF ECONOMICS

1.1 -- WHAT IS ECONOMICS ALL ABOUT?



ECONOMICS is the study of how society organizes to develop and use its productive resources (manpower, capital goods, and natural resources) to satisfy human wants. Economics is concerned, therefore, with RESOURCES, with TECHNOLOGY and with social INSTITUTIONS -- and how these three sets of forces interact to determine how well off a society is in terms of the goods and services that it has.

* * * * * * * * *

"The time has come, the Walrus said, to speak of many things;
Of shoes, and ships, and sealing wax, of cabbages, and kings."

--from "The Walrus and the Carpenter" by Lewis Carroll.

Lewis Carroll's verse gives us an impression of what "economics" is all about. It suggests that economics is concerned with many different things -- clothing, transportation, business supplies, food, and government. We could, of course, add to the list, almost without limit; because economics is concerned with a very large part of the life of man. Economics has been called the study of "man in the everyday business of life" and the study of "how man makes his living". Economics includes the study of money, business, personal finance, the stock market, farming, labor unions, profits, taxes, department store sales, and more.

But what is the basic subject matter of economics -- the theme that puts all of these specific subjects under the heading of economics? ECONOMICS is the study of how society organizes to develop and to use its productive resources to satisfy human wants.

RESOURCES. What does this definition of economics really mean? First of all, resources are those things that can be used to produce goods and services. Goods are material things that can be used to satisfy wants or to help produce other things. A hamburger sandwich is a "good"; a TV set is a "good"; a bulldozer is a "good". Services are activities that

satisfy wants, such as a haircut you get in the barber shop, having your tooth pulled by the dentist, your minister's church sermon on Sunday morning. These terms, "goods" and "services" are important; they are part of the technical language of economics.

Generally, economists divide all the things that can be used in production into three groups: labor, capital, and natural resources.

LABOR, or MANPOWER, includes all human effort (work) used in production -- physical effort, mental effort, and any other kind of effort you might think of. Labor is what HUMAN RESOURCES contribute to production and includes digging ditches, operating machines in a factory, pumping gasoline at the corner service station, and supervising the stock clerks and checkers in a big supermarket.

CAPITAL includes all the tools and equipment used in production. We'll use this term to mean capital goods, although sometimes people use the word when they really mean "money". The important thing to remember about capital goods is that they are produced by man, and are used in further production rather than for satisfying people's wants directly. Examples include a farm tractor, the Brooklyn Bridge, a factory that produces rubber tires, and a school building along with the books and classroom equipment that it contains.

NATURAL RESOURCES include land, minerals, rivers and lakes -- all the things that are available in nature and can be used in production. Sometimes the term "land" is used for this type of resource; and this may seem strange since it includes such resources as water (for river barges; and for generating hydroelectric power), and oil reserves still under the ground.

* * *

TECHNOLOGY. One of the most important principles of economics is that resources are determined by technology.

Whether something can be used in production (usefulness is what makes it a resource) depends on whether people know how to use it, and have the necessary skills and the equipment to use it. (Back in the 1930's, there was a mining company in Colorado that was producing molybdenum -- a metal similar to chromium -- and throwing away another substance that happened to be found in the same rock. The substance wasn't valuable as a productive resource because industry had no important use for it. In the 1940's, however, a scientific and technological breakthrough sent the miners digging frantically to recover the "unwanted substance". It was uranium ore and scientists had found a use for it in producing atomic energy.)

TECHNOLOGY refers to our knowledge of how to make and use tools. Technology is one of the most important forces at work in the economy. It is the chief cause of economic progress and the basic reason for the high productivity of the American economy. Much more will be said later about technology and its cousins, "automation" and "cybernation".

* * *

INSTITUTIONS are patterns of social organization and behavior. And economic institutions are the behavior patterns that influence the way we develop and use resources.

Institutions are the "coordinating systems" of our economy. They are the methods and organizations (and traditions) that control the use of resources. The wage system for example, is an institution ("invented" during the Middle Ages) for having men and women exchange some of their time and effort for money -- so they can then exchange the money for goods and services. Another institution is money itself -- which is really not so much a "thing" as it is a system of behavior. We all agree to accept pieces of paper in exchange for services or goods, even though the pieces of paper have no value in themselves. They are valuable for what they can buy, and this depends on the institution of market exchange.

* * *

The heavy emphasis that economics places on the subject of institutions is perfectly natural, since economics is a SOCIAL SCIENCE. It's social because it is concerned chiefly with how groups of people behave. Economics is a science because it makes use of the scientific method in testing its theories by making predictions and checking them carefully against the facts.

* * * * * * * * *

1.2 -- WHAT ARE THE THREE BASIC PROBLEMS FACING EVERY ECONOMIC SYSTEM?

Every economic system is faced with three basic questions: (1) What should be the TOTAL LEVEL of production? (2) What particular KINDS of goods and services should be produced? and (3) How should the total income of the society be SHARED among its individual members? These three basic problems have to be solved by every human society in the world, regardless of how primitive or advanced it is and whether it is capitalistic, socialistic, or some hybrid form.

* * * * * * * * *

When we speak of an ECONOMIC SYSTEM (or "an economy") we mean simply the way that a society of people is organized to use its resources. The American economy is the total economic system of the United States -- including all of its Institutions, Technology, and Resources. Later, we will describe in detail some important features of our economic system. Now, however, we turn to the question of what an economic system must do -- the functions that every economic system must perform.

* * *

Every economic system, regardless of whether it is the socialist economy of the U.S.S.R. or the market economy of the U.S.A., is faced with three basic questions:

1--What should be the TOTAL LEVEL OF PRODUCTION? How much is to be produced, in total? How big will the nation's "economic pie" be, in total? The answer to this question carries with it the answers to some related questions. For example, when we decide on the total quantity of goods and services to produce, we are also deciding on whether to make full use of the economy's available resources. Setting the total output, therefore, involves deciding on the overall level of economic activity for the whole system.

2--What particular KINDS OF GOODS AND SERVICES should be produced? Given the overall size of the economic pie, what is its composition? (If it's a pizza pie, and it's the giant 20" size, the next question is: What's in it? How much cheese, tomato sauce, sausage, mushrooms? What mixture of different things?) The nation's output can be made up of "guns and butter" (economists use these examples to represent in a simple way the division between military goods and civilian goods); or capital goods and consumer goods; or gadgets and plain necessities. The actual composition of output in the real world, of course, is far more complex.

3--How is the TOTAL INCOME of the society to be SHARED among its individual members? That is, once the goods are produced, the question comes up: Who gets how much of what? How is the nation's economic pie going to be sliced? How is income to be distributed?

These three questions will always be answered, one way or another, through the institutions that make up the economy. The problems will be solved, more or less satisfactorily. The actual patterns of production and income distribution will always be worked out in some manner.

The people that make up the economic society may like the way these problems are solved, or may dislike the answers, depending on whether the outcomes are consistent with the goals and aspirations of the people. (More will be said later about economic goals.) If the people like the way their economic system answers the three basic questions, it can be said that the system is performing well. To the extent that they don't approve of the actual level of production, the kinds of goods and services

that are produced, or the way income is shared, they can attempt to change the resources, technology, and especially the institutions in such a way as to get results more to their liking.

* * *

The economic system of the United States of America is basically a private-enterprise system, where individuals and groups of people own most of the productive resources and make decisions as to how they should be used. We have private property rights concerning natural resources and capital goods.

The Union of Soviet Socialist Republics is a socialist or "communist" economy, where most of the natural resources and capital goods are owned and controlled by government.

The United Kingdom of Great Britain and Northern Ireland has an economic system that is often described as "democratic socialism" -- with some of the basic productive resources owned and operated by the government. But this birthplace of industrial capitalism is still largely a private-enterprise economy. And the same is true of France, Germany, and Japan, among other countries.

In some ways, the economic systems of the U.S., Russia, Japan, and Britain are very much alike. They all make use of money and prices, methods of production are technologically advanced, they use billions of dollars worth of capital equipment, and they are all highly productive -- among the richest nations in the world.

But their economies also differ -- in the way they are organized to use (and to develop) their resources. One of the most interesting subjects in economics is the study of "Comparative Economic Systems", which focuses attention on how these different types of economies answer the three basic questions of How Much, What, and For Whom to Produce.

* * * * * * * * *

1.3 -- ECONOMIC INSTITUTIONS

An "institution" is an established pattern of group activity -- a set way of doing things. Sometimes there are formal organizations like schools and civil courts that provide a structure for carrying on these activities (education and law-enforcement). But an institution can exist without a formal organization to go along with it. Economic institutions are the habits, procedures, and established ways that a group of people (or a nation) follows in using productive resources. Some important economic institutions are the labor market, the money and banking system, private property rights, progressive income taxes, labor unions, and the business system. Institutions change over time, growing and adjusting gradually to changes in technology and production.

* * * * * * * * *

Economics is a study of three sets of forces -- Resources, Technology, and Institutions -- and how they all interact on one another. The quantity and quality of labor, capital, and natural resources along with technology will always set the upper limit to what a nation can produce. However, it is the society's institutions that will determine the actual level and pattern of production by determining how the resources are used. The important thing to remember about institutions is that they depend on the beliefs and behavior of people. Most scholars agree that there are no "natural" institutions; only man-made institutions.

John Stuart Mill, English philosopher and economist, pointed out more than a century ago the importance of institutions in determining the distribution of wealth and the sharing of income.

"The laws and conditions of the production of wealth partake of the character of physical truths," he wrote in Principles of Political Economy. "There is nothing optional or arbitrary in them . . . . It is not so with the Distribution of Wealth. That is a matter of human institution solely. The things once there, mankind individually or collectively can do with them as they like. They can place them at the disposal of whomsoever they please, and on whatever terms. Further, . . . any disposal whatever of them can only take place by the consent of society . . . . Even what a person has produced by his individual toil, unaided by anyone, he cannot keep, unless by the permission of society. Not only can society take it from him, but individuals could and would take it from him, if society only remained passive . . . . The distribution of wealth, therefore, depends on the laws and customs of society. The rules by which it is determined are what the opinions and feelings of the ruling portion of the community make them, and are very different in different ages and countries; and might be still more different, if mankind so chose."

The economies of different countries, such as the United States and Soviet Russia may be very much alike in their resources and technology -- as indeed they are. But when you look at the economic institutions of the two countries, important differences can be seen. For example, private property is a key institution of the American economy. According to this institution, individuals and groups of individuals are allowed and encouraged to own capital goods and natural resources and use the "means of production" to further their own economic self-interest. (Property is not a "thing" like a factory building or oil well; it is a bundle of legal rights concerning the use of economic resources.)

In Russia, the institution of private property is outlawed, with certain exceptions. Basically, the means of production -- capital and natural resources -- are not owned by individuals and private organizations such as business corporations. The means of production are owned collectively by the government. Note that capital (man-made goods used in production) is found both in the capitalistic U.S.A. and the socialistic U.S.S.R. The big difference between capitalism and socialism is an institutional difference, centering around how we are organized to use our capital goods and other resources.

In the U.S. economy, the prices of most goods and services are set by market forces -- supply and demand, or in some cases decisions made by business corporations and labor unions. (Only in wartime are prices generally set and controlled by the government.) But in Russia, prices are set by government planners practically all the time, and consumers have to adjust their buying decisions to whatever these prices happen to be. This is another institutional difference betwen the two systems.

* * *

One final example of an economic institution that we want to discuss is "acquisitive behavior". This is a fancy name for the desire to "get ahead in the world". It is the profit motive. Many writers and businessmen speak of this desire to make money and build up a stockpile of material goods as "the American dream". In certain other countries and in other periods of history, people are not motivated in their economic lives by this acquisition drive. A typical villager in India, for example, would not dream of changing his job or where he lives in order to increase his wages by 15%. Perhaps you have heard the story of the South Sea islanders who worked for the U. S. Air Force during World War II building airfields. They worked eight or 10 hours a day for as little as 25 cents per day. When the Air Force raised their pay to 50 cents a day out of humanitarian generosity, many of the natives decided to work only half a day. Others worked three days, then took the rest of the week off. (They went fishing, or just loafed.) Earning as much as they could get -- typical American behavior -- was not their habitual way of behaving. Acquisitive behavior was not an institution of their economic system as it is in the U.S.A.

* * *

An interesting intellectual exercise is to list a number of economic institutions, and consider three things about each one: 1) where the institution came from; 2) what function it serves; and 3) whether it ought to be changed.

Some present-day American economic institutions:

The 40-hour work week
Radio and TV commercials
Tax-exempt status of church property
AFL-CIO
Inheritance of wealth

Institutions have their roots in the past. Society inherits most of its institutions from earlier times. Because institutions come to us from the past, many people feel that they shouldn't change. Before the 1930's it was argued that we shouldn't have a Social Security system to provide government pensions for retired workers, because we had never had one in the past. Free public education for everyone was criticized when the plan was first suggested in the early 1800's, as was universal adult suffrage -- letting all grownups vote. Labor unions and collective bargaining by workers were bitterly opposed by business, the courts, and government until the 1930's.

* * *

Because they have their roots in the past, institutions are slow to change. But when technology changes and economic growth takes place, a basic problem arises: Can society adjust its economic institutions quickly and smoothly and fairly enough to keep pace with technological progress and economic growth?

For example, automation (a form of technological change) is eliminating the need for certain kinds of workers. (A couple of years ago, there was much discussion of the claim that automation was "destroying 40,000 jobs a week" in this country and the "cybernation revolution" would create mass unemployment by 1975.) What happens to the people who lose their jobs when machines take over? Sometimes they can simply go out and find a new job, using the same skills they used on the old job. But in the case of coal miners, farmers, and railroad firemen, they can't transfer their skills so easily. New institutions -- manpower development and technical training programs and temporary unemployment compensation -- may be required to meet the needs of people whose jobs and lives are disrupted by technological change and economic growth. (During the past 20 years, 75% of the jobs in coal mining were wiped out; four and a half million jobs in agriculture disappeared; and more than half the railroad jobs vanished.)

Is automation a real problem today? Should society halt the spread of automation, or encourage it? Why? How we adjust our economic institutions so that the burden of change will not rest too heavily on particular individuals and groups is a major economic issue of the day.

* * * * * * * * *

SUMMARY. Economics is the study of how society organizes to develop and use its productive resources to satisfy human wants. It is a social science that studies the interaction of Resources (labor, capital, and natural resources), Technology (tool-making and tool-using knowledge), and Institutions (patterns of social organization and behavior). Every economic system must answer three basic questions: How Much, What, and For Whom to produce? It must determine the Overall Level of economic activity, the Composition of output = income, and the Distribution of income. Economic institutions are the established patterns of group behavior that influence the way we use resources. Institutions are man-made, rooted in the past, and often very slow to change, even when technology is advancing rapidly and the size and structure of the economy are radically altered. How to make wise institutional changes is one of the biggest continuing problems that society faces in a growing economy.

#

II. MARKET CAPITALISM AND SOME BASIC PRINCIPLES OF ECONOMICS

2.1 -- CAPITALISM: "THE ANATOMY OF FREE ENTERPRISE"

> The economic system of the United States is a mixture of private enterprise and government, of competition and "monopoly" power, of tradition and of the market mechanism. But even though it is a very complicated mixture of many things, it still remains basically a capitalistic system built on the foundation of private property, the profit motive, free enterprise, competition, and market prices.

* * *

The U.S. economic system is known by many different names: "free enterprise", "market system", "capitalism", "profit system", "price system", "private enterprise", "free competition", "mixed capitalism", and some others, both more and less complimentary. Each of these terms tells us something about the way our economy is organized and how it is believed to be operating. What is the correct name for our system? What kind of economy do we really have?

Of course, the answer is that we have a very complex system, and there is no "right" name for it. (Most economists would probably agree on a term like "Mixed Capitalism", or "Mixed Economy", or "Basically Private Enterprise".) But where do all the labels listed above come from? What do the terms imply?

* * *

If our economy is "mixed", you may well ask the question: "A mixture of what?" Basically, two things -- "pure capitalism" and those factors such as monopoly power and government intervention that inject "impurities" into the system. (These "impurities" are not always necessarily bad or harmful. Sometimes they are exactly what the people desire and may have very good effects on the economy.) First, let's consider the anatomy of pure capitalism or the theoretically ideal "free enterprise system".

* * *

Pure capitalism has five distinctive features. That is, there are five important institutions of a capitalistic system. (These institutions were first explained back in 1776 when Adam Smith, a British philosopher

and economist, published his famous book, The Wealth of Nations.) The basic institutions of capitalism are:

-- Private property
-- The profit motive
-- Free enterprise
-- Competition
-- Prices and wages determined by the free market

* * *

PRIVATE PROPERTY is the basic institution of capitalism. It is the core and the foundation of the whole system. Without the legal institution of private property, capitalism could not exist. What, then, is meant by "private property"? It is simply the legal right to own capital goods and natural resources, and the right to use them and dispose of them any way the owner wants to. Private property is not a thing, like a coal mine. It is "a bundle of legal rights" that prescribe how the coal mine may be used. Because we have the institution of private property in the United States, individuals and groups of individuals are allowed (and encouraged) to own coal mines (and other resources) and decide how they should be used in production.

* * *

How should coal mines be used, under a system of private property? This is where the second feature of pure capitalism comes in: THE PROFIT MOTIVE. In a capitalistic system, with the institution of private property, resources are supposedly used by their owners in such a way as to make the largest possible profits. The profit motive is identified as the driving force that activates and allocates resources for use in production. The desire for money gain is the core of the incentive system in a capitalistic economy. Of course, not only the owners of land and capital, but also workers (and consumers) are motivated to do as well as they can in the economy. Economists refer to behavior that is aimed at maximizing some economic magnitude as "rational" behavior.

* * *

FREE ENTERPRISE is another feature of pure capitalism. This means that an individual, or a group of individuals, is free to start his own business: to come into existence as a producing unit. It is a "natural" outcome of the legal right of private property and the profit motive in the sense that setting up a business enterprise is a good way to take advantage of profit opportunities in the economy.

* * *

A fourth characteristic of pure capitalism is COMPETITION. This was emphasized by Adam Smith in The Wealth of Nations. Without real competition in the market, businessmen might take advantage of consumers -- charging high prices and selling shoddy merchandise. Without competition among sellers, consumers would have no freedom of choice and would have to take whatever was available. Competition is a necessary feature of capitalism because it forces producers to be efficient, to charge prices that are near to the costs of production, and to guarantee that consumers have real freedom of choice. Competition is not the same thing as rivalry or "trying harder". It is the absence of market power, the antithesis of monopoly power.

* * *

Finally, under pure capitalism PRICES and WAGES are determined by supply and demand forces at work in free, competitive markets. Large numbers of independent buyers and sellers come together in free markets, and prices are automatically set. Whenever prices are set by monopolistic businesses or labor unions or through government regulation -- as they sometimes are in the real world -- the system is not pure capitalism.

* * *

Is the American economy in the 1970's "pure capitalism"? To answer the question, check each of the five features listed above. Do we have private property? Are the American people driven by the profit motive? Is there free enterprise in the sense that people can start up any kind of business they want? Is there competition in the market for consumer goods? -- In the market for resources? Finally, how are prices set? -- By supply and demand forces operating in competitive markets? -- Or by monopolistic businesses and by government regulations?

* * *

Your answers probably suggest at least three reasons why the U.S. economy today is not pure capitalism. First, there are some monopolistic (non-competitive) markets. Big corporations and labor unions do have some market power to influence the prices of goods and services. Second, government does step in and regulate prices and production in certain areas like farming, public utilities, and sometimes even the steel industry and railroads. Finally, people aren't always well-informed; and they don't always act "rationally". When consumers and other economic decision-makers fail to act rationally, the system won't work according to "the ideal". If consumers, and workers, and business firms aren't well-informed, rational, competitive, and if they aren't willing to make rapid adjustments in order to increase profits and incomes, then the system of pure capitalism breaks down.

* * *

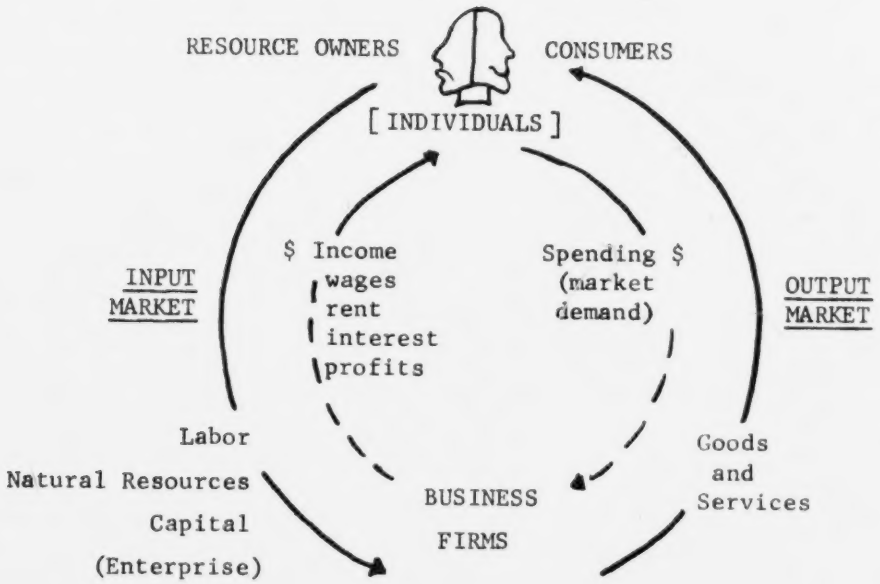
Actually, pure capitalism has never really existed -- except in people's minds (and in some economics textbooks). But something very close to it did exist in Britain, the U.S., and other European and English-speaking countries of the world during the 1800's and early 1900's. Today, however, most countries of the world have a "mixed economy". Our economy probably has more features of pure capitalism than any other nation in the world. Our system is growing and changing. Fifty years from now, we can predict that it will be different from what it is now. But today, and probably 50 years from today, the name "mixed capitalism" fits our economy pretty well. To understand the anatomy and functioning of today's actual American economy requires a basic understanding of theoretical capitalism or "the market model".

* * * * * * * * *

2.2 -- THE CIRCULAR FLOW OF ECONOMIC ACTIVITY

In every economic system, decisions have to be made concerning the amounts and kinds of goods and services that are produced. Who makes these decisions in a market-type economy, and how are they made? For the most part, economic decisions in a capitalistic system are made by Consumers, Business Firms, and Owners of Productive Resources. The decisions are linked together and coordinated by flows of MONEY and flows of GOODS & SERVICES in a system of MARKETS.

* * *



The diagram shown above is an economic "model". It is a simplified picture of the private sector of the economy, leaving out the role of government. This "private sector" accounts for about four-fifths of all the goods and services produced in our economy each year. Later we can make the model more realistic (and also more complicated) by putting government in and converting the model from one that describes pure capitalism to one describing mixed capitalism.

Let's make crystal clear what it is that we are showing with this diagram. First, we list the three units that make important economic decisions in the private (non-government) part of our economic life.

These decision-making units are (1) Consumer Households, (2) Business Firms, and (3) Resource Owners.

Second, we show that in our economy there are flows of money and flows of goods and services. The flows of goods and services are influenced by money flows, because ours is a "market" economy. Goods are produced to meet market demand. (A market is a pattern of exchange relations, where things are bought and sold.)

Third, we show some details of the INPUT MARKET. This is the market for productive resources, where labor, natural resources, and capital are sold to business firms. The money that business firms pay for these resources becomes the income of the resource owner.

Finally, we show how the OUTPUT MARKET -- where goods and services are bought and sold -- is linked to the input market.

* * *

How do we explain that two-headed character at the top of our diagram?

The smiling face on the right-hand side represents INDIVIDUALS in their capacity as CONSUMERS. Every person in our economy is a consumer (205 million mouths to feed) and belongs to a "Consumer Household." (There are 50 million consumer households in the U.S. having two or more members, plus an additional 13 million that have only one person in it.)

Consumer households make economic decisions in the output market. They decide whether to buy particular goods or services, what quantities to buy, whether to buy from one business firm or its rival across the street. Consumers spend money to buy goods and services in order to enjoy consuming them (and that's why the face on the right is smiling).

The face on the left shows INDIVIDUALS in their capacity as RESOURCE OWNERS. Not all individuals own productive resources, but most of the consumer households in our economy have at least one resource owner -- a person who has manpower (or labor) to exchange for money in the input market.

There are over 80 million men and women in the American labor force, which means there are at least 80 million resource owners. Why? Because that many people are owners of their own labor. In addition, there are people who own natural resources (such as oil wells and farmland) and people who own capital goods (factories, stores, etc.). All in all, there are about 85 million resource owners in the U.S. economy (without double counting). Although many people really enjoy their productive activity, we have drawn a frown on the left side of our two-headed individual to suggest that the input side of production is perhaps less pleasurable than consuming the output of goods and services.

When the resource that we call labor makes its services available to Business Firms (say, for 8 hours a day, five days a week, to help produce automobiles), what does labor get in return? All those people who contribute human effort (manpower) to production receive a payment that economists call "wages". This includes hourly wages, monthly salaries, sales commissions, tips, fringe benefits, and all the other direct and indirect payments for work.

Owners of natural resources who allow their land or materials to be used in producetion are paid something called "rent". Note that this isn't the same thing as the rent your family pays for the house or apartment you live in. That rental payment really includes the costs of labor services and capital goods (the house and its fixtures) as well as the use of land itself.

Owners of capital who allow their buildings and equipment to be used in production receive a payment called "interest". Actually, they often receive this interest for letting people use their money, which in turn is used to buy buildings and equipment.

Finally, in addition to Labor, Natural Resources, and Capital, there is a fourth "factor of production" or type of resource that sometimes is included in the circular flow model. That's "enterprise" -- the economic function of making basic policy decisions (not day-to-day supervising and managing) for a business, and bearing risk. The payment made to enterprise, when the business is successful, is called "profits".

* * *

Looking at the circular flow diagram again as a model of a capitalistic economy (with government temporarily left out), we can show how money flows in one direction and goods and services in the opposite direction. Consumers spend money in the output market to buy goods and services from business firms. These expenditures are like dollar votes that give signals to business, telling them what to produce (more transistor radios, nylon sweaters, houses, cars, and rock music festivals.) The market is actually a communications system, with the signals given by the dollars that people spend.

When the business firms receive signals in the output market from consumer households, they can make (and change) their plans concerning what and how much to produce. And they can turn to the input market and buy the resources they need to produce the goods and services that are demanded by consumers. (And sometimes business firms buy resources and use them to influence consumer demand and the kinds of signals consumers send out in the market.)

Resource owners receive money income in payment for the labor, natural resources, and capital they provide. This income is available to be spent on consumer goods. Individuals take in money with the left hand as resource owners, and then spend it with the right hand as consumers. (Or, Poppa earns wages in the input market, and Momma takes and spends it in the output market.)

Although buying and selling are not the most important kinds of economic behavior -- production is the most basic economic activity -- they are very important. The circular flow model gives us a way of picturing who it is that makes the buying and selling decisions in a market system; what effects these decisions have in guiding resources into productive use; and how goods and services are "rationed" to consumers who have the willingness and the ability to purchase them in the marketplace.

The model shows that the purpose of business is not "to satisfy human wants". It is to make profits by producing the goods and services that people effectively demand (pay for) in the market.

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2.3 -- THE DIVISION OF LABOR AND ECONOMIC INTERDEPENDENCE

> Men and women long ago learned they could produce more and better goods and services by working together as a team rather than working alone and trying to be a "jack of all trades". Adam Smith, "the father of economics", sang the praises of the division of labor and argued that it was the best way to increase the Wealth of Nations (the title of his famous book, published in 1776). But SPECIALIZATION OF LABOR (on the basis of comparative skill advantages) not only increases total production; it also increases the economic INTERDEPENDENCE of all members of society.

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A circular flow model illustrates how the productive resources of labor, capital, and natural resources are combined by business firms to produce goods and services. In this way, "inputs" of manpower, machinery, and materials are converted into "outputs" of food, clothing, cars, and TV sets to satisfy the wants of millions of consumers.

Of all the resource inputs, nothing is more important to the economy than the quantity and quality of its MANPOWER. To see how important labor is in the economic process, and what factors influence the productive powers of labor, let's go back in history nearly 200 years and see how these questions were answered by the first great English-speaking economist, Adam Smith.

* * *

Improvements in the "productive Powers of Labor" was the first topic that Adam Smith covered in his famous book, The Wealth of Nations, published in 1776. (This book is considered to be one of the most important ever written. The author -- Adam Smith -- was a professor of philosophy and economics from Scotland and is generally considered to be "the father of economics." Many of the theories that he explained in The Wealth of Nations are still taught to students of economics here in the United States and all over the non-communist world. The ideas of Adam Smith mean as much to people in the English-speaking countries of the world as the ideas of Marx, Lenin, and Mao mean to Russian and Chinese communists.)

Lesson number one that Adam Smith teaches about the causes of improvement in the productive powers of labor is that "Division of labor is the great cause" of increased productivity. The example he used was a pin factory that made ordinary straight pins, like those used in sewing and packaging clothing:

"A Workman not educated to this business, nor acquainted with the use of machinery employed in it, could scarce make one pin in a day, and certainly could not make twenty. But in the way in which this business is now carried on, not only the whole work is a peculiar trade, but it is divided into a number of branches, of which the greater part are likewise peculiar trades.

"One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving the head. To make the head requires two or three distinct operations; to put it on is a peculiar business; to whiten the pins is another. It is even a trade by itself to put them into the paper.

"The important business of making a pin is, in this manner, divided into about 18 distinct operations. I have seen a small factory of this kind where 10 men were employed, and where some of them consequently performed two or three distinct operations. But though they were very poor (and did not have the best of machinery) they could, when they exerted themselves, amke among them about 12 pounds of pins in a day. There are in a pound, upwards of 4,000 pins of a middling size. Those 10 persons, therefore, could make among them upwards of 48,000 pins in a day. Each person, therefore, making a tenth part of 48,000 pins, might be considered as making 4,800 pins in a day. But if they had all worked separately and independently, they certainly could not each of them have made 20, perhaps not one pin in a day -- that is, not even a small part of what they are at present capable of performing, because of a proper division and combination of their labor on different questions." (from Adam Smith, The Wealth of Nations, Modern Library Edition, pages 4-5, with minor editorial changes.)

Smith explained why the division of labor resulted in greater production. First, being able to work at a single task helps the worker improve his skill. Second, there is a big gain by saving time that would otherwise be lost in moving from sort of work to another. And third, division of labor makes it possible to develop and use specialized machinery (i.e., capital goods embodying improved technology) that helps workers turn out great quantities of production.

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The idea of specialization and division of labor is one of the basic principles of economics. It tells us first that we can get more total output of goods and services by using our brains to organize the job in order to save time, take advantage of each worker's skills, and benefit from the use of machinery and tools. Second, the principle of division of labor tells us that the output of the whole community, the nation, and the entire world can be increased by having individuals and business specialize in producing the goods and services that they are especially good

at producing, and letting other people produce goods and services that they can produce more efficiently.

* * *

In a modern society, we divide the labor and carry the principle of specialization to such extremes that sometimes a worker doesn't even know what he is producing and where it fits into the overall picture. A factory worker who tightens one bolt on a truck wheel as it moves past him on the assembly line may never even see what the finished truck looks like! But production managers have discovered that the assembly-line method is a very efficient way to organize the job and divide the labor, and since the efficiency criterion stands so high in our system of values, we make widespread use of assembly lines and other highly impersonal methods of mass production.

* * *

Along with specialization of labor comes economic interdependence. Just as we depend on the assembly-line worker to tighten bolts so we can have trucks, he in turn depends on hundreds of other people to feed him and his family, and to provide housing, clothing, schooling, and many other goods and services.

The greater the division of labor, the greater the productivity. But more specialization means more interdependence. Consider how we depend on the farmer to plant and harvest enough crops; the electric companies to produce and transfer electric power to light our homes and keep our refrigerators running (not to mention our furnaces and kitchen ranges); the oil companies to refine gasoline and maintain adequate supplies in thousands of service stations; and state and local government to provide educational services for our young people. An occuasional crop loss, power failure, or work stoppage in a key industry helps us to realize just how dependent we are on other members of our economic society.

This high degree of INTERDEPENDENCE, which is the other side of the coin of specialization and improved productivity, is one reason why economics is such an important subject. Since we are all part of an interdependent economic system -- as producers and consumers -- we need to know more about how the system is organized, how it operates, and how our own personal decisions and behavior will affect other people, and their decisions will in turn affect our own well-being.

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2.4 -- EVOLUTION OF THE INDUSTRIAL SYSTEM

Our present-day industrial system is quite different from what it was 50 or 100 years ago. Today's economy is the product of evolving technology, resources, and institutions. A process of continuing economic development and change is going on right now, and can be expected to transform our lives in the future just as the original Industrial Revolution changed man's economic and social world in the 19th and 20th centuries.

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What was economic life like a thousand years ago? Or 300 or 400 years back, say in 1600 -- in Europe, where capitalism and the industrial system first developed. People worked, they produced goods and services, and they consumed. (They also paid taxes.) But how they worked, what they produced, and the quantity and quality of food, clothing, housing, and other goods and services that they were able to consume -- these were all vastly different from today.

Economic life during "the Middle Ages" (500 A.D. to 1500 A.D.) and for roughly 250 years afterwards, was "pre-industrial." Most men worked as farmers; some were craftsmen; a few were merchants. Production was mainly for subsistence. There were no huge corporations and bustling factories with power-driven machinery and armies of wage-earners. Transportation and communication were primitive: no railroads, automobiles, airplanes, telephones, radios, TV. People lived (half as long as 20th century Americans) and died in small isolated villages and towns, never knowing comfort, convenience, economic security, or what life was like 10 miles away.

Then, something happened. Over the years technology had been changing, gradually and continuously. Transportation methods were improved, productivity in agriculture and industry was increased, trade and commerce were expanded. Like a snowball gaining force and speed as it rolls downhill, a process of revolutionary change transformed the old feudal system of Europe into the modern industrial world that characterizes Europe, the United States, and other areas scattered around the world.

What happened in the mid-1700's and early 1800's has come to be called "The Industrial Revolution". It started in England and Western Europe, and later spread to America and other parts of the globe. Some say it is still going on. Others believe we are now living in a second industrial revolution.

The term "Industrial Revolution" is used to describe a period of history when the pace of economic development was so rapid and the changes so

dramatic and far-reaching that our social and economic life was "revolutionized". But more specifically, what are the historical facts about the Industrial Revolution? And why is the history of the Industrial Revolution significant for Americans living in the 1970's?

* * *

The Industrial Revolution was a process of technological and economic change that took place, first in England, and later in other countries of the world in the period after 1750. Machines were invented; water and steam power were harnessed to operate the machines; factories were built; large cities mushroomed; and men, women, and children were employed by a new class of "industrial capitalists" to produce goods for sale in markets throughout Europe and around the world. The key to the industrial revolution was the use of new machines and new methods to produce textiles, iron, pottery and hardware, machinery, and other goods. Rapidly improving technology was used to expand production; and the whole pattern of social and economic arrangements was disrupted and restructured in the process.

Examples of technological advances are the inventions of John Kay, James Hargreaves, and Richard Arkwright in the spinning and weaving of cloth. Abraham Darby and Peter Onions found better ways of making iron. Thomas Newcomen and James Watt developed the steam engine. In America, Eli Whitney invented the cotton gin in 1793 and began using interchangeable parts for mass-production of guns a few years later.

Before the introduction of these new machines and factories to house them, the production of clothing and other goods was done primarily in workers' homes or small shops under the "domestic system". With the growth of factories, workers left their homes and workshops began selling their labor in theindustrial manpower market. Many books have been written describing conditions of the early factory workers in England and in the United States. What the factory system did was to bring equipment (machines operated by water power, then steam, and later electricity and the internal combustion engine), under the supervision and discipline of industrial managers. One result of this was vastly increased production. There were other results, too. For example, the new system created certain problems for workers, who now became completely dependent on industrial employment for making a living.

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Turning to the second question that we posed about the Industrial Revolution -- its significance for Americans living in the 1970's -- we can answer very briefly. The 18th century Industrial Revolution created today's world. The process of technological development and institutional change that started after 1750 created what we now call The Industrial System and thereby shaped the economic and social environment that we live in.

But the Industrial Revolution is also important because it showed us the process of technological progress and economic growth. This process is still going on today, at a faster rate than ever before. By looking back at the impact of industrial development in the past 200 years, we can now see into the future, not perfectly, of course, nor in full detail. We can see how machines affect the work that men and women do, the goods and services they consume, and the kind of world they live in. Using this knowledge of the past, we can make plans and adjustments to ease the burdens of future change and find ways to take fuller advantage of the opportunities and rewards of continuing economic growth -- not only as consumers, but also as workers and members of society.

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2.5 -- "GROSS NATIONAL PRODUCT" AND SOME FUNDAMENTALS OF ECONOMIC STATISTICS

The Gross National Product (GNP) of any nation is the total value of all the goods and services that its people produce in a particular year. GNP statistics are useful because they give us important facts about the overall level and composition of our current production and help us understand how our economy is behaving. In addition to GNP, there are other "economic indicators", such as the Consumer Price Index and the Unemployment Rate, that are useful in measuring the performance of our economy.

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Economics is a science, a social science. This means that scientific methods are used in studying the subject matter. People who want to read, think, and talk intelligently about economic questions have to master certain skills. They must become competent in using the techniques of STATISTICS, THEORY, AND HISTORY.

Theory and history are discussed elsewhere. Here we want to learn something about economic statistics, and especially the way to measure the performance of our economy by using Gross National Product statistics.

* * *

Many people seem to have a strange attitude toward statistics. "There are three kinds of lies," they say: "plain lies, damned lies, and statistics". "Figures don't lie; but liars figure." "I make up all of my statistics; isn't that where you get yours?" There is even a book entitled, How to Lie with Statistics.*

This attitude would be healthy if it caused people to be very careful about the way they used statistics. But unfortunately some people go beyond caution -- they refuse to believe any statistics at all! And this attitude comes close to saying, "Don't bother me with the facts; I'll make up my mind without them."

The truth is that most of the facts about economic questions come to us in the form of statistics. These are numbers that describe what is happening in the economy in terms of production, employment, spending, and all sorts of other activities and conditions. The numbers come from business, labor, farm groups, private research organizations, and state and federal government agencies. Most of the GNP statistics come from government agencies. Studies have been made of government statistics by unbiased experts, and their judgment over and over again has been that the data generally are as accurate, honest, and complete as anyone could hope for (though by no means perfect, conceptually or statistically).

* * *

Let's look at one set of economic statistics: the Gross National Product accounts. The following table shows the GROSS NATIONAL PRODUCT of the United States for 1969.

GROSS NATIONAL PRODUCT OF THE U. S., BY SECTORS, 1969

	(billions of dollars)	(per cent distribution)
Personal Consumption Expenditures (C)	$577	62%
Gross Private Domestic Investment (I)	140	15
Net Exports of Goods and Services (X_n)	2	--
Government Purchases of Goods & Services (G)	212	23
TOTAL GNP	$931	100%

Source: Economic Indicators, July 1970, U. S. Government Printing Office, p. 2.

*By Darrell Huff. It is a very interesting and readable book. New York: W. W. Norton & Co., 1954, 142 pp. Recent editions are available in paperback.

What do these figures mean? They tell us that the market value of the total output of final goods and services in the United States in 1969 amounted to 931 billion dollars. The dollar value of all the thousands of different goods and services that we produced that year -- cars, breakfast cereal, missiles, TV sets, haircuts -- totaled $931 billion. How do we compute the total? We simply add up all of the money that consumers spent to buy goods and services during the year ($577 billion); plus the investment spending by business firms on new equipment and buildings, etc. ($140 bil.); plus the excess of goods that we produced in this country and then shipped overseas above what foreign countries produced and sent to the United States ($2 bil.); plus the money spent by local, state, and federal government agencies to buy goods and services ($212 bil.) -- and we get a total of $931 billion. GNP = $C + I + X_n + G$. This is the total market demand for newly-produced goods and services, and the total that was supplied.

GNP is the total spending for (final) goods and services during the year -- eliminating the double counting of goods that are bought and sold by businesses in the process of production. Another way to look at GNP is to see that it is the total money value of the goods that our nation produces. GNP = Price x Quantity. GNP equals the Quantity of goods and services produced multiplied by the average Price at which the goods and services were sold.

The four terms in the GNP formula show that we have four major spenders in our economy: Consumers, Business, Foreigners, and Government. Altogether they purchase the entire output of our economic system.

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There is no need to become an expert in GNP accounting. The important thing to remember is that GNP is a measure of the total output of the economy. When GNP goes up, after adjusting for change in prices and the value of money, then we know that production has increased. If GNP remains constant year after year, then the economy is not expanding. If GNP goes down, we are in a "recession". GNP is the most important single measure of economic performance that we have available. Every student of economics should understand what it is and know how to interpret GNP statistics.

* * *

There are two other important statistical indicators that are used to measure the economy's performance: the Consumer Price Index and the Unemployment Rate.

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The CONSUMER PRICE INDEX, or the so-called "cost of living index" is a number that measures changes in the buying power of the dollar. When the Consumer Price Index (CPI) goes up, it means that the general level of prices is going up for the goods and services that consumers typically buy. When prices go up, the value or purchasing power of the dollar goes down. This is why inflation is considered to be a bad condition -- because people with a given number of dollars (such as older people living on fixed-income pensions) are unable to buy as many goods and services as they could before price inflation occurred.

The Consumer Price Index is figured on a base of 100 for the period 1957-59. In June of 1970, the CPI stood at 135.2. This meant that in 1970 it took $1.35 to buy the same "package" of goods and services that could have been purchased in 1958 for $1.00. Because of inflation -- as measured by a 35% increase in the Consumer Price Index -- the value of the dollar declined. During the 12-year period from 1958 to 1970, the Consumer Price Index rose an average of 3 percentage points a year. Actually, before 1965 and 1966, there was virtually no inflation -- no significant rise in the CPI, for a period of nearly a decade. Between 1958 and 1965, the Index rose an average of 1.3 percentage points per year, and this was largely the result of certain built-in upward biases of the Index itself.

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The UNEMPLOYMENT RATE is an indicator of unused manpower in the economy. It measures the number of men and women who are able to work and actively seeking employment but have no job, as a percentage of all persons in the civilian labor force.

The civilian labor force is made up of all persons 16 years and over who are able and willing to work (not in school, not in military service, not in prison, etc.). The size of the civilian labor force is growing every year, and in 1969 it averaged just over 80 million. Nearly three million people were jobless. Therefore, the national Unemployment Rate was 3.5%. This was the lowest unemployment rate in many years and was a cause for great celebration among economists. (During the Great Depression of the 1930's, the Unemployment Rate averaged nearly 20%!) During 1970, however, unemployment rose sharply, reaching 5.0% (seasonally adjusted) in May, reflecting the recession of 1969-70.

One strong word of caution must be said about unemployment statistics: Don't make the mistake of looking only at gross averages. To understand what is happening in the manpower market, it is necessary to observe the structure of employment and unemployment. In 1969, for example, when the nation's overall unemployment rate (UR) was 3.5%, the rate for Negro workers was 6.4%. The UR was only 2.8% for all male workers in 1969, but 4.7% for women. For men (white and nonwhite combined) aged 35 to 54 the UR was 1.5%, but for male workers 18-19 years of age, the rate was 9.4%.

* * *

Statistics on the labor force, employment, and unemployment are not perfect, but they are valuable indicators of the use we are making of resources in our economy. When the unemployment rate for labor increases, we assume that unemployment rates are also rising for capital goods and natural resources. When this happens, we are falling below the potential output that our economy is capable of. We are therefore wasting resources and "losing" goods and services that could be produced, but aren't. We are also failing to provide jobs and incomes for people dependent on the manpower market for their livelihood.

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2.6 -- SCARCITY, OPPORTUNITY COSTS, AND CHOICE

"Words are the vehicles upon which ideas ride."

The ideas that "ride" on the three terms included in the title of this section are among the most important in economics. Because of SCARCITY, economic choices have to be made; and every CHOICE involves a COST. Why? What do these terms mean, and how can the ideas be used in making wiser decisions?

* * *

There is a child's verse that goes:

"If all the world were apple pie,
And all the sea were ink,
And all the trees
Were bread and cheese,
What would we have to drink?"

If food, and other goods and services, were available just for the asking, it has been said, there would be no economic problem, and no need to study economics. Note that if it was money growing on trees, rather than goods and services, we would still have the same old problem of finding resources that could be used to produce the goods and services that people want. Your own private money tree might be great, for you, but if everybody had a money tree, money would be worthless. After all, you can't eat money; you can only trade it for something that has value in use.

Looking at the world economy as a whole -- with its three and one-half billion people -- we can readily see that there aren't enough goods and services available to satisfy all the wants that men, women, and children can think up. In fact, throughout much of the world, there isn't even enough food to keep people from starving to death. Thousands of people die of starvation every day -- not so many in the United States, but large numbers in other parts of the world such as India, China, Africa, and the Middle East. For two-thirds of the world's people, life is a desperate and painful struggle for existence, without comfort, without convenience, without progress, and without hope. Income per person in the poorest countries is less than $200 per year, compared to the per-capita income of $4,000 per year in the United States!

* * *

But even in our country, most of the people would like to have more goods and services than they actually get. Well then, why not simply produce more?

The answer is, we don't have enough resources -- manpower, capital, and materials -- to produce all of the goods and services that people would like to have. Goods are "scarce" relative to our wants, because the resources needed to produce the goods are scarce relative to physical requirements. This is what SCARCITY means -- not enough resources compared to what we would like to have.

Because resources are scarce, we must "economize" in their use -- that is, we must choose how to use our limited resources to provide the goods and services that we as a society value most highly. If we can't have everything we want, then we need to plan and make choices to get the most out of what we have. For an individual, or a family, the same problem exists. Because you don't have unlimited amounts of money, you have to economize and plan how to spend your money in the most "economical" way -- so you can get the most benefit from using the money you do have.

* * *

It's a fact of life that resources are limited (or "scarce" as some economists like to emphasize), and choices have to be made concerning the use of available resources. Are there any aids (ideas, skills, concepts, tools) that can be learned from the science of economics to help people make wiser choices? Yes, there are. And one idea is especially useful -- the concept of OPPORTUNITY COST. Consider the case of a young consumer, age 13. To help him (or her) decide how to spend his weekly allowance (say, one dollar), first of all think of some possible alternative uses for the money. He can buy five cans of pop, go to the movies once, buy four chocolate milkshakes. (Or save the dollar.) To illustrate the concept of opportunity cost, let's pose the question: What is the real cost of four chocolate milkshakes?

Assuming a price of 25¢ per milkshake, you could say that the total cost of four shakes is one dollar (25¢ times 4 milkshakes). Or, thinking in terms of the other things you have to give up if you spend a dollar to buy four shakes, the opportunity cost of the shakes was 5 cans of pop, or one movie ticket. The OPPORTUNITY COST of buying (or producing) a good or service is the ALTERNATIVE goods and services that must be sacrificed (foregone) in order to obtain the particular goods selected.

The opportunity cost of national defense to the American people is all of the houses, cars, hospitals, and schools that we can't have because we use so many productive resources for bombs, missiles, and nuclear submarines. The opportunity cost of having 7½ million young men and women in college is the value of the goods and services they could have produced if they were employed on jobs instead of going to school. (From the viewpoint of an individual student, the opportunity cost of spending four years in college is the amount of income he could have earned if he were employed on a full-time job during those four years. Add this to the tuition and other direct costs in order to compute the total costs of a college education.)

"Opportunity cost" is an important concept, and a very practical one. It can help us make wiser decisions concerning the way we use our resources, by providing a basis for comparing the benefits of different uses. In the example above, if we feel that we would enjoy the benefits of four milkshakes more than 5 cans of pop -- or some other attainable combination of goods and services (such as 2½ cans of pop plus two milkshakes) -- then we can have more confidence that we are spending our money wisely. We not only know what we are getting from using our resources in a particular way, but also what we are giving up. If we see what could be produced with 10 million dollars worth of manpower, capital, and materials if we decide not to produce a new bomber for the U. S. Air Force, we are in a better position to choose, as citizens, what we consider to be the best combination of goods.

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2.7 -- "THERE IS NO SUCH THING AS A FREE LUNCH"

One of the basic facts of life is that we can't get "something for nothing". One particular person might get it for nothing, but somebody pays. In economics, the OUTPUT of goods and services (like cars and candy and clothing) depends on the INPUT of productive resources such as labor, equipment, and raw materials. There are always COSTS involved in the production of goods and services.

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Unless you're a magician, you can't get rabbits out of a hat unless you first put something into the hat. To produce chickens, you have to have eggs. To grow corn, the farmer needs seed, soil, fertilizer, the services of a tractor, and lots of hard work. To build a bridge, you need steel, heavy equipment, skilled workers, and engineers. Economic activity doesn't begin with buying and selling. It begins with production -- the use of resources to produce goods and services.

* * *

Several years ago the economics editor of a major national news magazine spoke to a group of professional economists on the topic: "The Teaching of Economics". He started off by listing, partly as a joke, "some simple, basic economic truths that every one should be taught". His first "truth" was this: "There is no such thing as a free lunch". (Years ago, taverns used to advertise "Free Lunch" to attract customers. The sandwiches and pretzels were free. Customers had to buy the beer.)

What the speaker meant was that goods and services are never "free" in the sense that they don't have to be produced, or paid for. The free lunches might be provided to the customers without charge, but that doesn't mean there were no costs involved. There were costs. (The tavern owner had to pay for the pretzels and bread and meat and pickles and mustard. Wheat and rye had to be grown to provide the flour to make the bread, and livestock had to be fed and marketed and processed by meatpackers, and so on. All this involved costs of production.) And, a fact of great significance, there are opportunity costs. For every unit of output, there must be INPUTS -- materials, manpower, and capital. Not only must these inputs be paid for by someone, but note also that if they were not used to provide "free lunches" they could be used to produce some alternative goods and services. (This is true in education, too, as the speaker pointed out later in his talk. "In the great cafeteria of economic understanding, there is no such thing as a free lunch.")

* * *

Let's look at the OUTPUT of the U. S. economy for 1969, and then see what INPUTS of resources were necessary to produce the goods and services.

In 1969, the total output (GNP) of the U. S. economy amounted to $931 billion. We produced $577 billion worth of goods and services for consumers, such as food, cars, clothing, books, vacation trips, and so forth. Our economy produced $140 billion of capital goods for business investment, such as new machinery, office buildings, and inventories of goods. We exported to foreign countries $2 billion of goods and services in excess of what we imported from other countries. An we produced $212 billion of goods and services for use by local, state, and federal government agencies. This included $79 billion of weapons, ships, airplanes and manpower services for national defense; the services of two million school teachers; and goods and services needed for all the other functions performed by city, county, state, and federal government. (The simple formula to remember for counting the nation's total output of goods and services is: $GNP = C + I + G + X_n$. Gross National Product is the total of all spending for Consumption + Investment + Government Purchases + Net Exports.)

The following table shows our total output for 1969 and how it was divided among the four groups of buyers in our economy.

Table I. GROSS NATIONAL PRODUCT OF THE UNITED STATES, BY SECTORS, 1969

	(billions of dollars)	(per cent of total GNP)
Consumer Goods and Services (C)	$577	62%
Gross Private Investment (I)	140	15
Net Exports (X_n)	2	-
Government Purchases of Goods & Services (G)	212	23
State & Local Governments	(111)	
Federal Government	(101)*	
TOTALS	$931	100%

*Federal purchases for purposes other than national defense totalled $23 billion.

SOURCE: Economic Indicators, July 1970, p. 2.

* * *

What were the INPUTS that were used in producing all those goods and services?

The input of MANPOWER is seen in figures on labor force employment. During 1969, on the average there were 78 million men and women employed in producing goods and services. This number includes all of the unskilled workers, the technicians, the managers, self-employed doctors and lawyers, and everyone else who was employed during the year.

* * *

The input of CAPITAL is a little harder to measure. You can get a rough idea of the capital input, however, by looking at the following table. It shows, for example, that every worker in the chemicals industry had an average of $77,000 worth of equipment, buildings, and tools on hand to help him get the job done.

Table II. CAPITAL INVESTED PER EMPLOYEE IN MANUFACTURING, 1962*

Industry	Amount
Chemicals	$77,000
Motor Vehicles	22,000
Petroleum (refining, extraction, pipe lines)	27,000
Printing & Publishing	11,000
ALL MANUFACTURING INDUSTRIES (AVERAGE)	$16,000

*Total investment divided by all employees, including clerical and supervisory.

SOURCE: "Road Maps of Industry" #1526, National Industrial Conference Board, 1965.

* * *

The input of NATURAL RESOURCES is even harder to measure than capital. We will only illustrate the input of natural resources by pointing out that a few years ago each consumer in the United States -- every man, woman, and child -- used 18 tons of materials each year. He used 7 tons of fuel for heat and energy, 2 tons of building materials, 3 tons of food and other agricultural materials. He consumed 150 gallons of water per day in household consumption. An additional 1,250 gallons per person were used per day in industry and agriculture. (Compare this total water use of 1,400 gallons per person each day in the United States with a total of only 50 gallons a day in Europe.)

* * *

What we have shown is that large amounts of manpower, capital, and natural resources were required to produce nearly a trillion dollars worth of goods and services in 1969. With only 6% of the world's population, and not quite 7% of its land area, the United States each year produces about one-third of total world output. Of all the raw materials used up in production each year in the entire world, the U. S. economy consumes more than half. Our output is fantastically great, but our input of resources is also large. Some people are deeply concerned over the rate at which we are using materials and feel that the "conservation of natural resources" is a problem that we ought to pay close attention to.)

* * *

Economists have a special name for the relationship between inputs and outputs. They call it a "production function" (i.e., a particular relationship among variables). A production function tells what kinds and amounts of resources are needed to produce a particular good, assuming that a certain method of production is used. Technological progress and automation, of course, bring about changes in production functions.

* * *

One final point concerning the idea that "there is no such thing as a free lunch." Sometimes people make the mistake of thinking that goods and services that come from the federal government are free. Citizens often vote against a local tax increase for schools because they don't want to pay the cost. Then, acting under a "fiscal illusion" they may turn around and tell their Congressman in Washington that they prefer federal financing of education -- because they think they are getting something for nothing. But federal money also comes from taxes (though not the same types, of course). In the same way, colleges often receive gifts from business corporations, for scholarships or to pay for new buildings. Are the new campus buildings "free"? Obviously somebody paid for them -- the stockholders in the corporation, consumers who pay prices that more than cover the costs of production, employees whose wages might have been higher if the corporation's extra money had gone to them rather than to a college. This doesn't mean it's wrong for the federal government to help pay for the schools. Or that corporations shouldn't give money to colleges and universities. It simply means there is no such thing as a free lunch.

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2.8 -- MODELS, THEORIES, AND THE REAL WORLD

The economic world is so complicated and confusing -- involving millions of people making tens of millions of decisions affecting the production of billions of dollars worth of goods and services -- that we couldn't even begin to understand it without simplifying and carefully organizing the subject matter. In order to study and explain how the economy functions, scholars have developed ANALYTICAL FRAMEWORKS, simplified MODELS, and economic THEORIES. Many of these models and theories are very simple and also very useful for explaining and predicting economic behavior.

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"The construction of a model consists of snatching from the enormous and complex mass of facts called reality a few simple, easily manageable key points which, when put together in some cunning way, can serve for certain purposes as a substitute for reality itself. Simplification is the heart of this process."

-- Professor Evsey Domar, Massachusetts Institute of Technology

* * *

In order for a person to think clearly about economics, and be "economically literate", he must learn how to use three kinds of tools: History, Statistics, and Theory. We have already learned something about economic statistics and history. Here we focus on some elementary theory.

In the American economy there are roughly 60,000,000 consumer units, 80 million resource owners, and more than 10 million business firms. There are approximately 250 "working days" in a year (52 weeks times five days in a week less 10 holidays). Most households make at least one economic decision (for example, to buy a loaf of bread from the store) every working day. Multiply 60,000,000 consumer units by 250 decisions, and that comes to 15 billion individual consumer decisions made in the U. S. economy during the year. Add the decisions made by resource owners and business firms -- and, the total number of decisions becomes enormous!

How are all these decisions coordinated? How could anyone possibly explain or predict the patterns of decision-making and economic behavior? The answer: By simplifying. And by organizing the important facts systematically in order to study and analyze them.

* * *

Let's consider how economists simplify and organize facts and ideas to help explain economic behavior, and specifically how we have done so in this Primer on Social Economics. What did we do first? We set up a framework for studying economics. We divided all the factors that concern the economy into three groups and called them "Resources", "Technology", and "Institutions". (These are "subsets" of the set of forces that we identify as "economic forces".)

Next, we went beyond this analytical framework and developed simple MODELS. One was the circular flow model, which helps explain how the market is organized and how it operates. A model tells something about how the economy behaves. It shows relationships among important factors. The circular flow model shows how consumers buy goods and services in the output market. It illustrates how resource owners sell their productive services in the input market. And it shows how business firms buy in the input market and then sell in the output market.

A MODEL is a scheme or gadget that represents reality, just as a globe is a round model (or map) of the earth. Most of the models used in economics, however, are limited to pictures, numbers and words.

* * *

What about THEORIES? For some people, "theory" is a scare word. But it really shouldn't be. An economic theory is just a more specific kind of model. A theory describes a set of specific relations among economic forces. It tells something very specific about the world of facts. The Supply and Demand Theory of Market Prices, for example, tells us that the price of a good is determined -- when there is competition in the market -- by the interaction of Supply and Demand. The theory tells us that an increase in supply, with no change in demand, will cause the market price to fall. An increase in demand, with no change in supply, will cause the market price to rise.

A theory has certain assumptions and definitions; it makes predictions; and it shows how experimental tests can be conducted using facts in the real economic world. (Many so-called theories are not really scientific-empirical theories because there is no possible way to check whether they're valid.)

* * *

For most people interested in acquiring a working knowledge of how the economic system functions there is no need to learn all about economic theory, or even to learn the Supply and Demand Theory of Price. There are opportunities to study that in more advanced courses. The important thing

now is to understand what a theory is and how economic theories can be used to explain how the economic system functions in the real world.

* * *

Let's consider just two more important questions about models and theories.

First, when is a theory a good theory? Have you ever heard the statement, "That's all right in theory, but it doesn't work in practice." Actually, if a theory doesn't work in practice, then it isn't "all right". In fact, if it doesn't work in practice, it's just a bad theory. Theories, like all tools, are supposed to be useful -- to help you do a job. If a theory can be useful to make accurate predictions about economic behavior, it's a good theory. If a theory doesn't help do the job of predicting and explaining behavior, then it's a bad theory.

In economics, we don't have good theories to explain everything. In fact, there are a lot of things we really can't explain or predict very well. Like, how many skilled carpenters will be employed in Denver, Colorado, in 1980? But economics is a fairly young science, and improvements are being made all the time. It took physicists a long time to solve the mystery of atomic and nuclear energy. Meteorology still is not a very exact science. A science like economics that tries to understand and explain the behavior of people, in their complex and continually changing economic life, can be expected to be "inexact" and far from perfect. But remember we do have some excellent theories, some very useful models, and an analytical framework that can help you understand the economic world you live in.

Finally, there is the question: How important are theories, anyway? One of the most famous economists of our time, John Maynard Keynes (an Englishman who died in 1946), wrote an answer to that question that is widely quoted all over the English-speaking world:

> "The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else."

If evidence is needed to support this claim, consider the ideas and theories of men like Locke, Smith, Marx, Lenin, Hitler, Mao -- and their impact on the world we live in today.

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2.9 -- WHAT ARE THE STEPS IN ECONOMIC REASONING?

Economic problems are like other kinds of social and personal problems. If you want to find good solutions, it helps to organize your thinking and use a systematic, step-by-step approach. This involves getting a good understanding of the problem, thinking about what your goals are, looking at different possible solutions, anticipating the probable results of the alternative solutions, and then making your own choices and decisions.

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We have seen that every economic system must answer three basic questions: How Much, What, and For Whom to Produce. There are times when the people of a given economic society don't like the way these questions are being answered. They perceive certain "problems", such as poverty, inflation, unemployment, environmental pollution, urban blight, etc. To find good solutions, it helps to organize your thinking and use a systematic, step-by-step approach -- (the way professional economists tackle problems when they are called upon to advise businessmen, government agencies, and others). Here is a five-step approach adapted from the book, An Introduction to Economic Reasoning:*

1--Define THE PROBLEM by looking very carefully at the most important facts and clarifying the main issues and questions involved -- making good use of history, statistics, and theory;

2--Identify GOALS, that is, the things you would like to accomplish as well as the underlying VALUES;

3--Consider ALTERNATIVE METHODS for reaching your goals: usually there is more than one way to get a job done, and if you think creatively and use your imagination, you can think of a variety of possible ways of accomplishing a given objective;

4--Analyze the probable CONSEQUENCES that might result from using each of the different methods that might be used for reaching your goals -- including the likely Benefits, Costs, and Other Effects.

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*By Marshall A. Robinson, H. Morton, and J. Calderwood. Washington, D.C.: The Brookings Institution, 1956. A fourth edition was published in 1967 in paperback.

5--Finally, after studying the facts and different possible solutions, make a decision and CHOOSE the solution that you think gives the best chance of achieving the goals you picked.

This method of economic reasoning will be clarified and applied to a variety of public policy issues considered later in this Primer.

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SUMMARY. The economic system of the United States remains a "basically free enterprise" or market capitalism system. Key features of capitalism are: private property, the profit motive, free enterprise, competition, and market-determined prices. Decisions are made in a market economy by consumers, business firms, and the owners of productive resources. These decisions regulate the flow of money and goods in both the output market and the input market. Division of labor not only raises productivity but also increases economic interdependence among members of society. The industrial economy is continually changing under the impetus of technological progress, and this challenges the American people to adapt and adjust their institutions to contribute to human well-being.

In order to read, think, and talk intelligently about economic questions it is necessary to develop basic competence in the use of statistics, theory, and history. Three important statistical indicators of the economy's performance are: Gross National Product, the Consumer Price Index, and the Unemployment Rate. The concept of opportunity cost can help individuals and the entire nation make wise choices concerning how we use our available resources. Another basic economic principle is that there is a functional relationship between resource inputs and the output of goods and services: "There is no such thing as a free lunch". The use of analytical frameworks, models, and theories enables us to describe and study the economic process by providing useful simplifications and ways of organizing the subject matter of economics. Five steps in economic reasoning can help you find better solutions to public policy problems as well as individual economic problems. The five steps are: Define the problem; Identify goals; Consider alternative possible solutions; Analyze the probable consequences of each alternative; and then Choose the best solution in light of the stated goals.

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III. ENDS AND MEANS IN THE AMERICAN ECONOMY

3.1 -- ECONOMIC GOALS OF THE AMERICAN PEOPLE

> Just as individual men and women have aspirations and goals, it is also true that groups of people have goals that they set for the whole society. In the area of economics, some important goals of the American people are Full Production, Stable Growth, Freedom of Choice, Equality of Opportunity, Economic Security, Economic Justice, and International Balance. When our economy comes reasonably close to achieving these goals, we judge the system to be successful -- because it is serving the needs of the people.

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When he was President of the United States (1953-61), Dwight Eisenhower appointed a special Commission on National Goals to work out a set of goals for the American people in various areas of our national life. The Commission was made up of leaders from the fields of education, business, labor, and other professions. In 1960, after much study and discussion, the Commission published its report, entitled Goals for Americans, (published by The American Assembly, 1960, paperbound, Prentice-Hall Spectrum Book). It included ideas about what our country should do in such areas as:

> Technological change
> The democratic economy
> Education
> Economic growth
> The individual

Later, the National Planning Association, a private research organization, made a study of the dollar cost of achieving certain goals (and published a book entitled Goals, Priorities & Dollars, by Leonard A. Lecht, New York: The Free Press, 1966). The same year, another organization published a report called A 'Freedom Budget' for All Americans (A. Philip Randolph Institute, New York, 1966). It listed specific goals in the war against poverty and other areas and recommended that an additional $185 billion be spent by the federal government during the next 10 years to achieve the goals.

* * *

Setting goals, and then working to achieve them, is a sign of maturity and responsibility in a society just as it is a sign of maturity in an individual. What goals have the American people set for themselves in their economic life? And how well are these goals being achieved? These are the questions we consider in this section.

* * *

One important goal that the American people have set for their economy is FULL PRODUCTION. We want to make full use of the productive resources that are available -- the labor, capital, and natural resources -- and use these resources efficiently. Our nation feels so strongly about the importance of this goal that Congress passed a law (The Employment Act of 1946) making it the responsibility of the federal government to "promote maximum employment, production, and purchasing power."

How well are we achieving the goal of full employment and full production? (Since it is easier to measure employment and unemployment of manpower we use labor statistics as an indicator of the employment of all kinds of resources.)

In the 1930's we did very badly. The unemployment rate averaged nearly 20% from 1931 to 1939. Ten million people who were able and willing to work were jobless, on the average, in those years. During World War II and the Korean War, we came very close to having full employment. Then from 1954 to 1964 the unemployment rate rose above 5%, with between three and four million people unable to find jobs. By the end of 1965, economic conditions had improved, and we were close to full employment and full production from 1966 through 1969.

Our nation can't realistically expect to provide jobs continuously for 100% of the 80 million men and women who are able and willing to work. There will always be some unemployment -- roughly 2% to 4% of the labor force. But when millions of people are unnecessarily unemployed, it means they are not making a productive contribution to the country and they are not earning an income. For this reason, the goal of full production -- which requires both full employment and efficiency -- is one of the most important in our economy.

* * *

A second major goal is STABLE GROWTH. We want our economy to become bigger and better through the years. We measure the amount of our national output of goods and services by looking at statistics of Gross National Product. Economic growth is a steady increase in GNP per person (total GNP divided by the national population). We want GNP to increase more or less at a steady rate -- about 4% or 5% each year -- without having economic recessions or rapidly rising prices (inflation), or increases in unemployment.

Since 1929, our nation's GNP more than tripled; and in the last 20 years it has grown at an average rate of 4%. Growth has not been steady, however. In some years, GNP actually went down and we had "negative growth". From 1961 until early 1969 the economy grew rapidly and we enjoyed the most prosperous times in history. In these eight years, real GNP rose 46%!

* * *

Production, employment, and growth of GNP are all pretty easy to measure. When we come to certain other economic goals, however, we have to talk about them in more general terms.

FREEDOM OF CHOICE is a goal that practically everyone would include high on the list. But what does it mean in concrete terms? Economists have pointed out that freedom of choice is important for Consumers, for Workers, and for Business.

Freedom of consumer choice means that consumers will be able to select the goods they want to buy from a fairly wide range of alternatives, according to individual needs and preferences. We are not satisfied with a system where the consumer is told: "You can have any size and color hat you want -- as long as it's medium and black!"

Freedom of occupational choice is an important area of economic freedom. Men and women want to be able to choose the kind of work they will enjoy doing, and that will provide adequate wages and personal satisfaction. In order to exercise real freedom in choosing a career, men and women must have opportunities to acquire the formal education and other qualifications demanded by the job. They also need to develop an understanding of how the industrial system functions and influences the lives of workers.

Finally, we hear much talk about the importance of "free enterprise." This is an important aspect of freedom of choice. It gives people the freedom to start their own business and use the factors of production in such a way as to make a profit. Much of the American economic system is built on the foundation of this particular freedom.

EQUALITY OF OPPORTUNITY is another goal that is part of the American heritage. It is closely related to freedom of choice, because it says that all people should have approximately the same degree of freedom -- to exercise their rights as consumers, workers, and enterprisers.

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The goal of ECONOMIC SECURITY means that we want the members of our economic society to have enough money to be able to buy adequate food, clothing, shelter, and other necessities. In a rich country like ours, where the Personal Income per person is $4,000 (that's $16,000 for a

4-person family), it seems unnecessary and wrong to have people living in poverty and insecurity. This, of course, is why the American people established a social security system in the 1930's and why a "War Against Poverty" was declared in 196 .

In 1968, according to the Economic Report of the President, there were more than 20 million Americans living in poverty. Nearly half of them are children under 18 years of age. Such widespread poverty not only meant failure to achieve the goal of economic security for these Americans, but it also raised serious questions about whether we were achieving the goal of ECONOMIC JUSTICE in our society. Not everyone agrees on the meaning of fairness and justice in our economic life, but it is a goal that nearly everyone feels is important to define and work toward. The Economic Opportunity Act of 1964 and some of the recent civil rights and other legislation has aimed at improving economic justice for Negroes, Indians, Hispanos, and other groups of Americans.

* * *

Finally, there is one economic goal that is not limited to the boundaries of the United States itself, but spreads overseas to other countries. This is the goal of INTERNATIONAL BALANCE. We want to maintain a strong and balanced relationship in our foreign trade and international payments and in our relations with the underdeveloped nations and the socialist countries. Failure to achieve this goal not only causes serious economic problems at home and abroad, but also increases international tensions that threaten world peace.

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3.2 -- "THE BUSINESS OF AMERICA IS BUSINESS"

Calvin Coolidge, who was President of the United States in the 1920's, is well-remembered for making the statement that appears as the title of this section. Business -- the private enterprise sector of our economy -- is an important part of the economic life of our nation, accounting for 80% of our total production and income. BUSINESS FIRMS, hoping to make profits, make many of the buying and selling and operating decisions that determine production, employment, and marketing in our economy. One form of busines organization, the CORPORATION, receives nearly four-fifths of all business income and manages two-thirds of the nation's total production.

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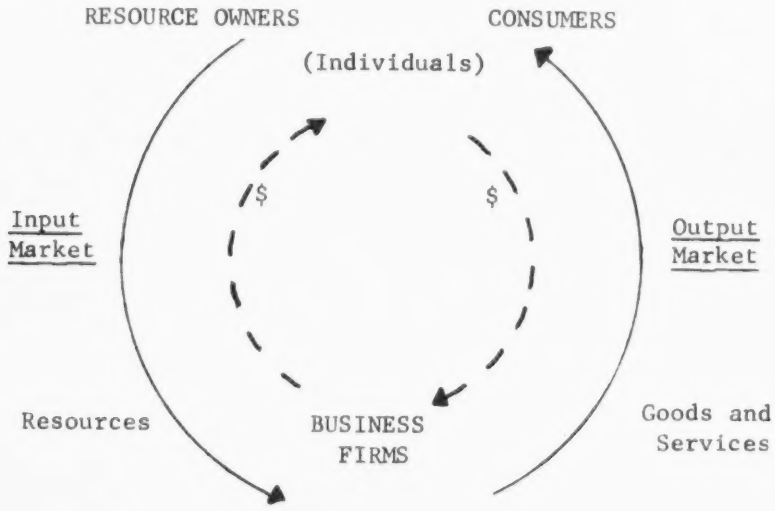
Business firms play a key role in the circular flow of economic activity, as shown in the simplified model below:



A business firm (or "enterprise" or "company") buys resources of labor, land, and capital in the input market. It combines and coordinates all these resources to produce goods and services. And then it sells the goods and services in the output market.

Why is it that business firms are willing to take on all this responsibility and effort and risk? The answer is that they hope to make a profit. They expect to be able to sell the finished products for prices

that are high enough to cover all their costs of operating the business and still have some profit left over. (Profit = Total Receipts - Total Costs).

The mainspring of business, the driving force that "makes businessmen run", is the profit motive. Business firms produce goods and services not "to satisfy human wants" but to sell the products in the market in order to make profits for the owners and managers of the business, and to provide investment funds for expanding the business. Generally speaking, in order to make profits the firm must produce goods and services that satisfy the wants of consumers. This system of production provides jobs and incomes for workers and for other resources.

* * *

Not counting farms and self-employed professionals like doctors and lawyers, there are about five million business firms in the United States. One million businesses are organized as corporations; nearly one million are partnerships; and three million are sole proprietorships. (If we included farms and professionals who sell their own services, as in the Table below, the number of proprietorships would be nine million and the total number of businesses in the country would be over 11 million.)

Most businesses are small, employing fewer than four workers. Many of these firms make no profits, and thousands of them "go broke" every year. The average life of a business firm in the U.S. is seven years. The big corporations, however, are generally much more stable, and earn much greater profits.

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Table I shows the business receipts of proprietorships, partnerships, and corporations in 1966. (Businesses organized as producer and consumer cooperatives, are not included in the table.)

Table I. BUSINESS FIRMS AND BUSINESS RECEIPTS IN 1966

	No. of Firms	Percent Distribution	Receipts	Percent Distribution
Sole Proprietorships	9,087,000	79%	$ 207 bill.	14%
Partnerships	923,000	8%	78 bill.	5%
Corporations	1,476,000	13%	1,249 bill.	81%
		100%		100%
(Largest 500 industrial corporations			333 bill.)	

SOURCE: U. S. Department of Commerce, Pocket Data Book USA 1969, p. 240; and Fortune Directory 1967.

* * *

Some corporations have grown to tremendous size. They are responsible for the production and sales of billions of dollars of goods; together they employ millions of workers; and they are "owned" by millions of stockholders (Table I shows that the 500 biggest industrial corporations actually do far more business than the total sales of all 9,000,000 proprietorships put together!)

General Motors corporation, for example, had assets of $12.9 billion in 1966 and sold $20.2 billion worth of automobiles, trucks, diesel locomotives, and a variety of other goods. Three-quarters of a million workers were employed by GM. Profits after taxes totaled $1.8 billion. This was an 8.9% profit rate figured as a percent of sales, and it was a 20.6% profit rate figured as a percent of invested capital.

General Motors is the biggest industrial corporation in the nation. But the Ford Motor Company, Standard Oil of New Jersey, and General Electric are giants, too. Each had more than seven billion dollars of sales receipts in 1966. The American Telephone and Telegraph Company (AT&T) had assets of $35.2 billion in 1966, operating revenues of $12.1 billion, net income of $2.0 billion. The corporation employed 650,800 workers and had over two million stockholders ("owners"). Four large corporations -- General Motors, Ford, General Electric and U. S. Steel -- had more employees in 1966 than the entire Federal government, not counting the Department of Defense. General Motors alone handled more money (receipts and expenditures) than the state governments of Ohio, Pennsylvania, Michigan, Illinois, New York, California, and Texas all combined.

* * *

What is a corporation? The simple answer is that a corporation is a form of business organization that gives the firm a separate legal existence. Money to set up and operate the business comes from people who buy shares of stock. These are the Stockholders, and might be thought of as the "owners" of the business. They are risking the money they "invest" in the corporation, and their hope is to receive dividends (regular payments on each share of stock they own) and also to make capital gains ("profits" from increased market value of the stock) if and when they choose to sell their shares to somebody else. Under the corporate form of business organization, basic policies are set by the Board of Directors, whose members are elected by the stockholders. The Board hires a President, Treasurer, and other members of "management" as Officers to run the corporation.

There is also a more complicated answer to the question: What is a corporation? Some economists believe that the giant corporation is really a new economic institution; one that replaces the supply and demand system

of market competition. Why? Because the "owners" of many large corporations (i.e., the stockholders) don't really control the business: small managerial groups, largely self-perpetuating, have control. Private property rights are sometimes limited and subjected to controls imposed by government: corporations are not always free to use and dispose of their capital and other resources any way they please. The corporations don't always behave "rationally" in terms of pricing and output policy. Neither are they competitive in the "free enterprise" sense. They sometimes "administer" their prices rather than letting the forces of supply and demand set them in the market place. Some experts on the structure of American industry argue that General Motors is really more like a government agency -- TVA, or the State of New York, or the Department of Defense -- than like the corner grocery store or the small tailor shop or construction firm. If they are right, it will be interesting to watch the giant "quasi-public" corporations during the next 20 or 30 years to see how they affect the nature and performance of our "mixed-capitalism" economy.

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3.3 -- GOVERNMENT'S ROLE IN OUR ECONOMIC LIFE

> When we speak of "Government" in our study of economics, we mean all of the units of government -- local, state, and federal. Citizens of the community, the state, and the nation use these governmental units to make rules, exercise controls, and engage in activities that influence the production of goods and services and the distribution of income in our economy. Government accounts directly for more than 20% of our Gross National Product.

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What image does the word "government" conjure up in your mind? A fire truck or police car rushing to the rescue? A teacher instructing his 11th grade math class? The U. S. Congress in Washington, D. C.? A job counselor in the State Employment Service? TVA producing electric power? A tax auditor from the Internal Revenue Service investigating your 1969 tax return?

We use the word "government" here to include all units of government -- local, state, and federal. These are political agencies, set up by citizens to handle certain jobs. There is one unit of federal government, 50 state governments, and more than 80,000 local governments! (Local government units include cities, counties, townships, special districts, and school districts. In the 1967 Census of Governments, there were 22,000 separate school districts in the United States, all with the power to levy property taxes.)

What kinds of services do these governmental units perform for their citizens? They put out fires, build roads, fight wars, operate schools, and handle hundreds of other assignments. (They also collect taxes to pay for all these activities.) Looking at government from the viewpoint of the economic functions they perform, we can think of government activities under four main headings:

1--Making Rules (e.g., civil and criminal laws, public health regulations, anti-monopoly laws, city zoning ordinances);

2--Producing goods and services (e.g., building roads, operating schools);

3--Transferring income (e.g., taxing, borrowing, paying social security benefits and welfare assistance to needy families);

4--Stabilizing the economy (e.g., raising and lowering taxes to stimulate employment and production and to prevent inflation).

* * *

Government has always played an important part in the economic life of the American people. In the past 40 years, however, government's role has expanded. Taxes and government spending -- at all levels of government -- have increased greatly. Government purchases of goods and services went up from $8.5 billion in 1929 to $212 billion in 1969 (partly because of inflation). As a fraction of GNP, government purchases of goods and services rose from less than one-tenth to more than one-fifth. Today government absorbs more than 20% of our total GNP. Approximately 10 million men and women are employed by government, three-fourths of them by state and local government.

* * *

Why is government involved in the four kinds of activities listed above? The reason that government makes rules and regulations is pretty obvious to most people. They're necessary in order to maintain order and stability for 200 million people in a huge country stretching 3,000

miles from the Atlantic Ocean to the Pacific, and 1,500 miles from Canada to Mexico. As our economic and social life grow more complex, we can expect that government involvement in our economic and social life will probably also increase.

But why does government get involved in producing goods and services, transferring income, and stabilizing the economy? One way to answer this question is to begin by realizing that we live in a democracy, and that if government gets involved in certain activities it's presumably because the people want it that way. The citizens of the United States turn to government to help solve certain economic problems because they apparently feel that government can help bring about better solutions than we can get without government participation.

What are these economic problems? They are the familiar "Basic Problems Facing Economic Society":

Deciding:

--How Much to produce;

--What specific goods and services to produce; and

--How to Distribute the income.

For example, in order to get a better solution to the problem of "How Much to Produce" -- specifically to achieve "maximum employment, production, and purchasing power" -- the people of the United States, through the Congress, have made it the responsibility of the federal government to "Use all practicable means" to promote these objectives. The Employment Act of 1946, which Congress passed with strong support from both Republicans and Democrats, contains this provision. (The Great Depression of the 1930's had left many people with the idea that our economy would not automatically achieve these goals without active help from the government.) The famous 1964 cut in federal income taxes was passed for the stabilizing purpose of encouraging full employment and growth, and according to Business Week magazine, it had exactly the right effect. The 1968 tax increase (the federal income tax surcharge) was adopted for the stabilizing purpose of halting inflation -- but was not very successful.

* * *

Government is involved in producing highways and schools because the American people want more and better transportation and education than they get individually through the private (market) sector of the economy. Because the federal government is responsible for "the common defense", it produces a large Army, Navy, and Air Force establishment. (And spends almost $80 billion of taxes each year to pay for it.)

Table I shows the amount of government spending, by function and level of government, for 1967.

Table I. GENERAL EXPENDITURES BY FUNCTION AND LEVEL OF GOVERNMENT, 1967
(Direct and Intergovernmental)

Function	Level of Government and Amount Spent (billions of dollars)			
	Local	State	Federal	Total*
National Defense & Space	-	-	$ 80.0	$ 80.0
Education	$28.6	$21.2	6.2	40.2
Highways	4.6	11.3	4.2	14.0
Public Welfare	4.0	7.2	5.6	9.6
All other functions	22.3	13.6	42.6	-
TOTAL GENERAL EXPENDITURES	$59.5	+ $53.3	+ $138.6	$216.9

*Aggregates exclude duplicative transactions between levels of government.
SOURCE: Statistical Abstract of the U. S., 1969, p. 412.

The table doesn't show all government expenditure. It leaves out the insurance trust funds (like the federal social security program), state liquor store receipts, and local utility revenues from city-owned water systems. Boxes have been drawn in the table to show that $80 billion was spent by the federal government on its biggest function, national defense and space research. Local and state governments spent $28.6 billion and $21.2 billion, respectively, on their biggest function, education.

Where does all this money come from? Altogether, government collected $176 billion in general taxes in 1967, plus $76 billion of insurance trust revenues and miscellaneous other receipts. The federal invidual income tax alone yielded $62 billion of revenues in 1967. Other big money raisers included the federal corporation income tax (§$34 billion), states sales taxes ($19 billion), local property taxes ($25 billion), and federal excise taxes ($16 billion). The per capita revenue bill of the American people in 1967, including general taxes plus other payments to government, amounted to $1,276.

* * *

We have noted that government spending and taxing influence the overall level of the economy and also the specific goods and services that are produced. Taxes and spending also affect the distribution of income. "Progressive" taxes such as the federal individual income tax take a higher percentage of income from the rich family than from the low-income family. Because sales taxes generally are "regressive" they take a higher percentage of income from poor families. Government transfer payments -- such as public welfare assistance and unemployment compensation benefits -- give more money to the poor than to the high-income families. These transfer payments help reduce some of the inequalities in the distribution of income in our economy.

* * *

Government's role in the economy is significant and complicated. Many people disagree about what the government ought to be doing in the economy, and there are many heated arguments on the subject. If you read the newspapers carefully during a political campaign -- especially when there is a presidential election -- you will see how important the economic issues can be in our national life. And in your own community, note the pro's and con's you hear when the time comes to vote on school bonds, local property taxes, and other dollars-and-cents issues.

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3.4 -- THE ROLE OF LABOR UNIONS

Although labor unions have existed in the United States for more than a century, they did not become a solid fixture in our economy until the 1880's; and membership was small until the 1930's. Unions were organized to give workers a stronger voice in dealing with employers regarding wages, hours, working conditions, and job security. Today 18 million men and women, about one-fourth of all American workers, belong to unions. The AFL-CIO is a federation of labor unions that serves as a national spokesman for union members.

* * * * * * * * *

"Organized labor" (sometimes called "the labor movement") is an important institution in the American economy. The term refers to the organization of workers into unions, and then linking these unions together through cooperation, and sometimes formal organization and federation, to accomplish certain common goals.

A labor union is an association of employees. The purpose of unions is to give men and women who work for pay a stronger influence in dealing with employers. Their motto is: "Through union, comes strength". They use this strength in efforts to gain higher wages, better working conditions, more control over their jobs, and improvements in the social and economic life of the working man.

* * *

We can make good use of history as well as theory and statistics to help us understand the institution of unionism as it exists today. Let's look back in history to see the kind of world our grandparents were born into.

* * *

What was it like to be a worker in America in 1900, some 70 years ago? The following description of the world of work at the turn of the century suggests some reasons why workers felt a need to join together into unions.

-- "The average worker made about $10 a week for a 60-hour week. Some textile workers put in as many as 84 hours. More than two million children, some only 12 years old or even younger, worked long hours, frequently at night, for which they were paid no more than 60¢ a day.

-- "For working 12 hours a day, seven days a week, garment workers were paid three or four dollars a week, out of which they often had to pay fines to their employers for talking, smiling, or breaking needles.

-- "The only relief from work came with the lay-off or the firing. And then came the desperate hours of search to find some work, any work at any pay just to stay alive.

-- "The places where garment workers were employed were dim, damp, disease-breeding places of labor called sweat shops. There were no regular hours; no minimum wages; no paid holidays; no vacations; and no human dignity."

* * *

The following working rules were imposed on the employees of a Chicago department store in the years just preceding the Civil War (quoted from a handbook for employees, distributed in 1857):

-- "Store must be open from 6 a.m. to 9 p.m. the year around.

-- "Each employee must not pay less than five dollars per year to the church and must attend Sunday school regularly.

-- "Men employees are given one evening a week for courting and two if they go to the prayer meeting.

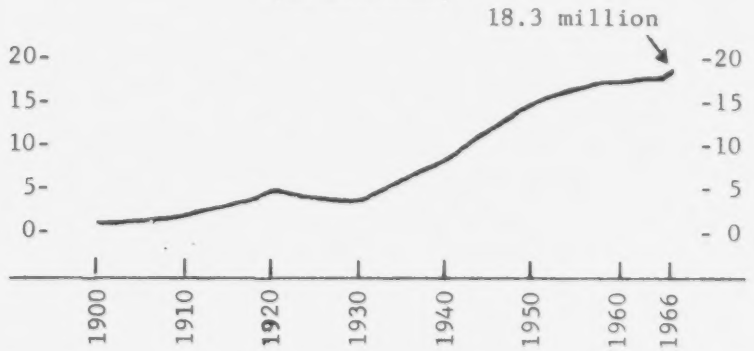
-- "The employee who is in the habit of smoking Spanish cigars, being shaved at barbers, going to dances and other places of amusement will surely give his employer reasons to be suspicious of his integrity and honesty."

* * *

Throughout most of our nation's history, business and government both opposed labor unions -- sometimes using the police, National Guard, and armies of "private detectives" to break up strikes and prevent efforts to organize unions. The individualist outlook of the American people was another factor that prevented unions from being formed. For many years, public sentiment was definitely not in favor of labor unions. As a result, union membership was small.

Chart I shows total union membership in the United States from 1900 to 1964.

Chart I. TOTAL UNION MEMBERSHIP IN THE UNITED STATES 1900-1966
(In millions)



SOURCE: Historical Statistics of the United States, p. 97f. For 1960 and 1966, Statistical Abstract of the U.S. 1969, p. 236.

Notice the sharp increase in members during the 1930's and 1940's. How is this to be explained?

Two factors provide most of the explanation for the growth of union membership after 1930. First, our economic system suffered its most severe breakdown in history. The Great Depression caused millions of workers to be unemployed. From 1932 to 1935, the unemployment rate never fell below 20%, and in the worst year, 1933, one worker out of every four was jobless. The American people lost confidence in the business system and looked for new ways, including unionism, to improve the economy.

The second factor was a change in the attitude of government. President Franklin Roosevelt publicly stated that "If I were a worker in a factory, the first thing I would do would be to join a union." In 1935, Congress passed the National Labor Relations Act (Wagner Act), guaranteeing workers the right to organize unions and bargain collectively with employers, without interference from management. Employers now were legally required to bargain in good faith with any union certified as a bargaining agent.

There have been many changes in the law dealing with unions since 1935. Some of these new laws have been designed to limit the power of unions -- e.g., the Labor-Management Relations Act (or Taft-Hartley Act) 1947 -- and also to make unions more responsible to their members and to the public -- e.g., the Labor-Management Reporting and Disclosure Act (Landrum-Griffin Act) 1959. But today, unions are a solid fixture in our economic world. As President Dwight Eisenhower said in the 1950's, "Only a fool would try to deprive working men and working women of the right to join the union of their choice."

Even today, however, only 18 million men and women, about one-fourth of all workers in the United States, belong to unions. But totals can be misleading. In certain industries unions are very strong and almost all workers are union members. In 1964, more than three-fourths of all workers in the transportation and construction industries were union members. At the other extreme, only about one-tenth of the workers in service industries, state and local government, finance and insurance, and retail and wholesale trade belong to unions.

A few national unions are very large. In 1966, the Teamster union (truck drivers, etc.) had over a million and a half members; the Automobile Workers and the Steelworkers had more than a million members; and the Machinists, Electrical Workers, and Carpenters were not far behind. The size and influence of some of these unions can be compared with the giant corporations that they bargain with in labor negotiations, such as General Motors, Ford, U. S. Steel, General Electric.

* * *

What is the structure of organized labor in the United States? In general, there are three "layers" of union organization. First there is the local union that exists within a particular factory of office building. Above the local is the national or international union (some are

called "international" because they include Canadian workers). It is the national union that has much of the collective bargaining power, especially in an industry like steel or automobile production. (In some unions there are districts or conferences interposed between the local and national levels.) At the top is the AFL-CIO federation. The AFL-CIO (American Federation of Labor and Congress of Industrial Organizations) is not really a union, and does not engage in collective bargaining with employers. It is an association or federation of more than 100 unions, including 16 million members, and serves as the chief spokesman for organized labor on such national issues as federal taxes, the war on poverty, and the election of the President and members of Congress. Not all unions are affiliated with the AFL-CIO: in 1966 there were 61 national unions outside of the AFL-CIO family, including the giant Teamsters union. In 1968, the United Auto Workers union dropped its affiliation with the AFL-CIO.

At the state and local level, there are labor councils or "central bodies" that represent organized labor in political affairs, educational activities, and a variety of other areas.

* * *

Attitudes regarding workers and unions were quite different in the early 1900's than they are today. When railroad workers were trying to build a strong union and bargain with management over wages and working hours, the president of the railroad in 1903 (George F. Baer, of the Philadelphia & Reading Railroad) made the following statement:

> "The rights and interests of the laboring man will be protected and cared for, not by the labor agitators, but by the Christian men to whom God in His infinite wisdom has given control of the property interests of the country. Pray earnestly that the right may triumph, always remembering that the Lord God Omnipotent still reigns and that His reign is one of law and order, and not of violence and crime."

* * *

What is the future of labor unions in America? This is a question that many people are asking. Some say that unions played their most important role in the 1940's and 1950's and now there is less need for them. With the spread of automation, however, many workers have turned to their unions to help protect their jobs and incomes. They feel that unions will play an important role in helping them achieve their goals of economic justice and economic security. There are many who predict that unions will continue to play a major role in determining wages and working conditions and will assume positions of great importance in new fields -- particularly with white collar workers. Unions of public school teachers and other government employees, for example, have grown up in recent years and have attracted attention across the country.

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3.5 -- CONSUMERS OF ABUNDANCE

There are 60 million consumer households in the U.S. economy. Together they spend over half a trillion dollars a year for the purchase of goods and services to satisfy the needs and desires of 200 million Americans. Consumer spending plays an important role in the Circular Flow of Economic Activity by influencing the OVERALL LEVEL of market demand, and by sending "dollar messages" to business firms telling them which PARTICULAR goods and services to produce for sale in the market. Patterns of consumer spending in turn, are influenced by the way income is DISTRIBUTED among households.

* * * * * * * * *

The American people have been called "the consumers of abundance". In the late 1950's, Professor John Kenneth Galbraith (who later became President of the American Economic Association) wrote a best-selling book entitled The Affluent Society; and most people agree that the title was a pretty apt description of the U. S. economy.

Our economy produces food, housing, clothing, cars, cigarettes, liquor, and other goods literally by the tons and megatons. We manufacture millions of automobiles, TV sets, household appliances, and gadgets each year. And we produce transportation services, entertainment, and many other services valued at billions of dollars.

Today, 98% of all households in the United States that are wired for electricity have a TV set; not quite as many have flush toilets and bathtubs or showers. Four out of every five households own a car and have telephone service; 95% of the wired homes have a washing machine; and virtually all have a refrigerator.

In most of the countries of the world, only the richest 2% or 3% of all households are able to own a car and refrigerator and TV set. In the United States, with only 6% of the world's population, we produce and consume between 30% and 40% of the world's output of goods and services. By almost any standard you can think of -- historical, comparison with other countries, or the physiological needs of humans -- we are truly an affluent society and "economy of abundance".

* * *

Our abundance of consumer goods and services is considered by many people to be conclusive proof that our economic system is the most successful the world has ever known. This judgment is based on the assumption, which many economists make, that "the single purpose of all economic

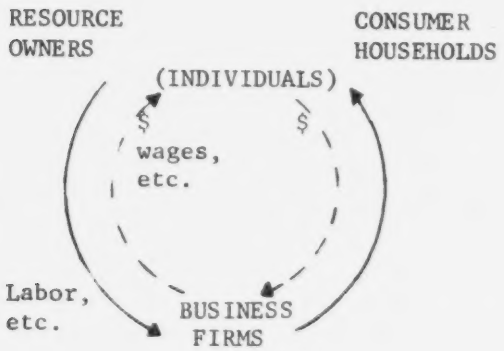
activity is consumption"; therefore the quantity and quality of consumer goods produced is the best standard by which to judge the performance of our economy. (While this is a powerful argument, we will take issue with it in the context of human values and the general quality of life.)

In any case, consumption is a very important part of our economic life. Everyone must consume in order to live. (It is said that some people live in order to consume!) Some people live "higher on the hog" than other people -- that is, the rich have vastly more consumer goods than the poor. We know that within our affluent economy, with all its abundance and wealth, some 20 to 30 million Americans still live in poverty or severe deprivation.

* * *

Today there are approximately 60 million consumer households functioning in the American economy. (A household includes all persons who occupy a house, apartment, room, or group of rooms as separate living quarters. A household can consist of one person or a whole family.) Since the population is roughly 200 million, the average size of each household is about three and one-third persons.

How do the 60-odd million households behave in the economy? That is, what do consumer households do in our economy? What economic functions do consumers perform?



The Circular Flow model shows that consumers spend money (this flow is indicated by a broken line); and consumers obtain goods and services (indicated by the solid line), which they use to satisfy their needs and desires.

Let's look at each of these functions in turn.

Consumers in 1969 spent $578 billion to buy goods and services. That's an average of more than $9,000 of consumer spending per household. They spent 45% of this on NONDURABLE GOODS such as food, clothing, and tobacco. They spent 40% of their consumer dollar on SERVICES such as household operations, transportation, and medical care. And the remaining 15% of consumer spending was for DURABLE GOODS such as automobiles and furniture and household equipment.

Where did the households get the money needed to purchase all these goods and services? Although some of their purchasing power came from past savings, most of it was current income. Total personal income in

1969, for all persons in the nation, amounted to $749 billion. Two-thirds of this personal income came from wages and salaries received for work that was done during the year.

As the Circular Flow model shows, employed workers earn wages and salaries, and then in their capacity as consumers, they spend much of it for the purchase of goods and services. They also pay taxes, save a little, and make other minor outlays. There is an important connection between earning and spending. You can't spend money in the consumer-goods market unless you have money; and the most important source of purchasing power (money) is current income from wages and salaries. A lesson to remember is that consumers are able to perform their spending function only if they have money to spend.

* * *

What are the consequences of consumer spending? When consumer households spend money in the market, they create an "effective demand" for goods and services. They exchange money for goods, and this stimulates business firms to produce more goods. (Note: we are using the term "goods" to include both commodities and services.) Spending in the market "greases the wheels of commerce and industry". In plain language, this means that when businessmen are selling their merchandise, they continue to produce more goods. And this means that manpower and other productive resources continue to be employed.

Consumer spending creates a demand for goods, which stimulates production, which in turn creates employment opportunities in the aggregate. But spending is always for particular goods and services. Therefore, consumer spending in the market also provides a system of signals or messages telling business firms to produce more of the particular goods and services that consumers say they want, and less of the goods that are piling up on the shelves and in the warehouses. When a consumer spends five dollars to buy a blue, size medium, short-sleeve shirt, in effect he is "voting" in favor of continuing the production of blue, medium, short-sleeve shirts. His dollar votes will influence not only the overall level of resource use in the economy but also the particular pattern of resource use.

* * *

This brings us to the second major function of consumer households: to obtain goods and services for use in satisfying wants. We have already noted that people must consume in order to live. Now, it is time to note that how we live will be greatly influenced by the quantity and the quality of the goods and services we consume. This is a paraphrase of the food faddist's credo: "We are what we eat". If we spend our consumer dollars for candy, cars, coke, cosmetics, liquor, cigarettes, guns, thrill magazines,

drugs, gadgets, and pills, we create a certain kind of world for ourselves and for our neighbors. Do we pollute our environment or enhance it? Do we contribute to the quality of life for ourselves and fellow men or detract from it? What are the private and the social consequences of consumer behavior? (Later we shall return to the concepts of private and social costs and benefits, or "externalities", as they are called. Basically, private costs are those burdens or sacrifices associated with production or consumption that are borne exclusively by the business firm or individual responsible for making a particular economic decision. Social costs are those burdens or losses that "spill over" to third parties or the public at large. When John Jones pays 35¢ for a hamburger, he bears the cost and derives exclusive benefit from eating the sandwich. When Peter Polluter burns chicken feathers in his incinerator, he enjoys the benefit of being rid of the feathers, but his neighbors bear much of the real cost by having to smell the foul odor.)

In our affluent society we have the economic power to produce and consume almost anything we choose. We have the freedom, within broad limits, to choose whatever we like. The kind of world we live in will depend to a very great extent on how wisely we choose and how well we use our freedom. For this reason the subjects of economic interdependence and consumer values become two of the most significant issues of our time.

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3.6 -- HUMAN RESOURCES & THE AMERICAN WORK SYSTEM

> Of all the factors of production, none is more important than human resources. The U. S. labor force includes more than 85 million workers classified according to their occupations, the industries in which they work, sex, race, age, and educational attainment. The development of a national manpower policy, investments in human capital, and changes in the structure and operation of the manpower market will have a major impact on the economy during the 1970's.

All the things that can be used in production are classified by economists into three categories: labor, capital, and natural resources. These are the "factors of production". (Sometimes a fourth factor is added: entrepreneurship, which refers to the policy-making and risk-bearing function performed in the business firm.) Until the 1960's, capital and natural resources dominated economic analysis; and labor (= manpower = human resources) was given rather short shrift. College textbooks included a chapter or two on unions and collective bargaining, macroeconomic theory was sometimes referred to as "employment theory" (without treating empirically the link between changes in aggregate demand and changes in the number of workers employed), and the section on functional income distribution included a chapter on the marginal productivity theory of wages. Then came MDTA (Manpower Development & Training Act), the "manpower

revolution", the economics of education, the war on poverty,human capital theory, and the emerging discipline of manpower economics (or, more broadly, human resources). When Edward Denison's 1962 research paper showed that increased educational attainment of workers added one and one-half times as much to the growth of U. S. national income during the period 1929-1957 as did investment in conventional physical capital, economists were forced to reexamine their traditional views of manpower. That process is currently under way.

In a brief overview, how can we best describe the role of human resources in the U. S. economy? We'll begin with a quantitative and qualitative sketch of manpower as a resource; discuss some institutional aspects of labor's role in the work system; and comment on the implications of technology for human resources, in terms of both challenges and opportunities.

Our Manpower Resources. The U. S. labor force consists of all persons who are employed (working for pay, even as little as one hour per week,plus those who work 15 hours or more as unpaid workers in a family enterprise) and all those who are officially counted as unemployed (jobless but available for work and made specific efforts to find work within the past four weeks). In 1970, the average size of the total labor force was 85.9 million workers -- 54 million men and nearly 32 million women. A little over 3 million were in the Armed Forces. Civilian employment averaged 78.6 million during the year, so the unemployment rate (unemployment divided by the civilian labor force) averaged 4.9%. By early 1971, the unemployment rate had climbed above 6% and 5 million men and women were looking for jobs.

One of the most remarkable manpower trends in the U. S. during the past two decades is the tremendous growth of womanpower. Between 1947 and 1970, the male labor force grew by 8 1/2 million; meanwhile the female labor force expanded by nearly 15 million! Why? Because the labor force participation rate of women rose from 31.8% (of the noninstitutional population 16 years and older) to 43.4% during that period -- and, thanks to Women's Lib, is still climbing. However, the much higher male labor force participation rate of 80.6% (down from 86.8% in 1947 and still declining) explains why men still make up the bulk of the American manpower supply: 63% of the total, as compared with 37% accounted for by women.

Racially, Negroes and Other Non-White Races account for 11% of the civilian labor force (they also comprise 11% of total U. S. population), but women make up 44% of the nonwhite labor force, with men accounting for only 56%. In terms of age,41% of American manpower is in the 25-44 age group, 38% are 45 years and over, and only 21% are young workers 16-24. The median level of educational attainment for the labor force in 1969 was 12.4 years of schooling, with 25% of all workers reporting one or more years of college and half that number holding college degrees.

Along with the growth of womanpower and the increase in schooling, another significant labor force trend is the expansion of the white-collar occupations -- especially professional and technical jobs. By 1969, white-collar workers (clerical, professional and technical, managerial, and sales) made up 47% of civilian employment; blue-collar workers (craftsmen, operatives, and nonfarm laborers) accounted for 37%; service workers comprised 12% of the total; and farm occupations had declined to only 4% of total employment. During the 1970's the fastest growing occupational groups will be professional and technical, service workers, and clerical workers; but in 1970 semi-skilled operatives still were the largest single group or workers,

followed closely by clerical workers who will rank first by 1980, according to projections).

We have glimpsed the American labor force in terms of who the workers are. Now comes the question: What work do they do? They use their brains, muscles, dexterity, personalities, and other forms of "human capital" (i.e., acquired capabilities that enhance worker productivity) to help produce goods and services. But while more than half of our total production (in terms of dollar value) still consists of goods, the fact is that the vast majority of American workers are not employed in producing goods at all -- they are producing services ("taking in each other's washing", as one cynical observer describes it). A century ago, in 1870, more than two-thirds of U. S. workers were employed in goods-producing industries (agriculture, manufacturing, mining, construction), with only 30% engaged in the production of services (in wholesale and retail trade, services, government, transportation, finance-insurance-real estate). Today 37% of the labor force is employed in the production of goods, while 63% produce services. In this sense, we have already become a "service economy", and the implications for productivity, income distribution, growth, and quality of life are awesome. Technological advance, automation, income-elasticities of demand for the output of certain industries, structural changes in the economy, and other factors combine to virtually assure a continuation of this trend away from goods, toward services. The big growth industries during the 1970's, according to Department of Labor projections, will be state and local government; and personal, professional, and business services. Agriculture and mining will lose jobs, manufacturing will gain only slightly, and construction is the only goods-producing industry that will show growth in employment that even matches the average for all industries.

Rates of pay vary by occupation, industry, race, age, and sex. Women workers (full-time, year-round), for example, earn only 60% of what men earn; and the median income of Black workers is only 75% of White workers. In 1970, hourly wage rates averaged $3.36 in manufacturing, $5.22 in contract construction, $2.84 in services, and only $2.44 in retail trade.

The Institution of Wage Employment. Nine out of every 10 workers in the U. S. economy are classified as "wage and salary workers" as contrasted with the 10% who are self-employed or unpaid family workers. This institution of wage employment -- an established pattern of social behavior for utilizing human resources in our market-type economy -- performs several economic and noneconomic functions:

-- allocates manpower to various industries and enterprises
-- distributes income
-- influences human resource development
-- assigns social status to men and women who participate in the labor force
-- provides varying amounts of satisfaction and opportunities for creativity and human fulfillment

It is surprising how little attention this pervasive socioeconomic institution -- popularly known as "the world of work" -- has received from economists, other social scientists, and educators.

What are the salient features of the institution of wage employment? A good place to begin is with the manpower market -- a pattern of exchange relations between workers (on the demand side of the market) and employers (on the supply side). The sellers and buyers of productive human effort (which is the valuable contribution that human resources make to the economic process) operate within a framework of rules, traditions, and socioeconomic conditions (e.g., labor legislation, racial attitudes, prosperity or recession) that influence employment (both quantity and quality) and earnings. A detailed description of the manpower market is beyond the scope of this Primer, but it is essential to explain its basic rationale -- the principle of marginal productivity -- and indicate some adjustments that have been made to improve the effectiveness of the manpower market.

According to the principle of marginal productivity, a "rational" (i.e., profit-maximizing) employer will hire another unit of labor only if that worker contributes to the dollar revenue of the firm an amount equal to or greater than the wage that must be paid (more precisely, the employer will hire manpower up to the point where the marginal labor cost equals the marginal revenue product). If a worker's productivity is too low, he will not be employed. His productivity can be increased in several ways, including making investments in his "human capital" through education, training, apprenticeship, work experience, health care, counseling, etc. But the point is, if a man or woman functioning as a human resource on a particular job is not able to produce goods and services that will add, say, $2 an hour to the employer's revenues, the employer will not pay the worker a wage of $2 an hour.

Employment and earnings play a major role in the value systems of most Americans (note the Protestant Work Ethic). If our goal is to provide jobs and earnings for all who wish to work, including the poor, then it may be necessary either to raise the employability and productivity of millions of workers -- or abandon the productivity principle as a basis for hiring. It would be possible, for example, to hire manpower on the basis of the time (input) they contribute to the job rather than the value of goods and services (output) they produce. This would require some form of subsidy, which most likely would have to be financed directly or indirectly by the federal government. Abandonment of the productivity principle for hiring workers is part of the rationale of a comprehensive public service employment system, or "government as employer of last resort".

Numerous adjustments have been made (and are being made) in the institution of wage employment, including those associated with the trade union movement discussed in section 3.4 above. Equal employment opportunity practices are being enforced; computerized job banks have been set up to match workers to jobs; a national manpower policy is evolving, with plans to decentralize manpower programs to states and cities, strengthen unemployment insurance, create additional public service (i.e., state, local, and federal government) jobs, provide opportunities for skill upgrading, and meet the needs of the full range of American workers from disadvantaged youth to displaced aero space engineers. The purpose (though

not necessarily always the outcome) of these changes is to serve the needs not only of the economy and of profit-seeking employers, but also to meet the needs of men and women functioning as human resources in the economic process.

Technology and Human Resources. In Chapter IV we consider the nature of technological advance and point out some of the benefits and burdens for man. In concluding the present discussion of human resources we shall merely point out that during the course of industrial evolution, technology has transformed the economic process and created a sometimes wonderful, sometimes terrible world for man to work in, consume in, and live in. But except for pointing out the general impact of technological progress on productivity and earnings, describing job-displacement patterns and employment trends by industry and occupation, and highlighting the need for new manpower skills, economists generally have not addressed themselves adequately to the qualitative implications of technological change. There are some exceptions: Thorstein Veblen's classic treatise, The Instinct of Workmanship; Clark Kerr et al., Industrialism and Industrial Man; Ben Seligman's Most Notorious Victory; and studies by writers outside the field of economics including Eric Fromm (The Revolution of Hope and earlier books), Michael Harrington (The Accidental Century), Desmond Morris (The Human Zoo). Sociologist William A. Faunce discusses the problems of automation, alienation, and the future of industrial society in a paperback entitled Problems of An Industrial Society.

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SUMMARY. Some major goals of the U. S. economy are Full Production, Stable Growth, Freedom of Choice, Equality of Opportunity, Security, Economic Justice, and International Balance. The performance of the economic system can be judged on the basis of how well these (and other) objectives are being achieved. The business sector of our economy accounts for about four-fifths of total production. Business firms assume the responsibilities and risks of coordinating production in hopes of making profits. Some corporations have grown to such tremendous size, employing hundreds of thousands of workers and receiving billions of dollars in revenues, that they may be supplanting the traditional "free enterprise" system. Local, state, and federal government play an increasingly important role in the economic system making rules, producing goods and services, transferring income, and stablizing the economy. Along with Business and Government, Labor Unions, since the 1930's, have become a major power center in the American economy. Their chief purpose is to give workers a stronger voice in dealing with employers over such matters as wages, working conditions, job security, and fringe benefits, as well as to influence government policies affecting the well-being of workers.

There are sixty-odd million consumer households functioning in the American economy, spending money in the market for the purpose of obtaining goods and services to satisfy human wants. The amount and pattern of consumer spending influences the overall level of economic activity, the manner in which productive resources are allocated, and the way real income is shared. Consumer values and behavior also help determine the quality of life for individuals and the entire society.

At the opposite pole of the "ends-means" productive process from consumers are the human resources that are employed in producing goods and services (along with the nonhuman resources of land and capital). Together with technology, it is the quantity and quality of our manpower (including womanpower) that largely determines the level of our nation's income and its growth potential. A national manpower policy is developing to help meet the needs not only of the economy and profit-seeking employers, but also to improve the quality of employment for the 85 million men and women who function in the U. S. economy as human resources.

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IV. THE AMERICAN ECONOMY: TRENDS AND PROBLEMS

4.1 -- THE KNOWLEDGE EXPLOSION: TECHNOLOGY, AUTOMATION, AND CYBERNATION

"Knowledge is power."
-- Francis Bacon

* * *

The application of scientific knowledge to the production of machinery and equipment, and goods and services for consumers, is one of the greatest "inventions" in the history of man. Rapidly improving technology in the mid-20th century makes it possible to produce new goods, more goods, and better goods. Technological and economic change also create adjustment problems for individuals and for society.

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Throughout history, man has been a "seeker of knowledge" for many reasons. Man wants to know, simply for the sake of knowing. Just as men climb mountains because the mountains "are there", men also study the heavens and the earth and the creatures that inhabit the universe. Why? Because man is curious, and wants to know. But man is also very practical. He wants to survive on this planet, and he wants to extend his control over his environment. He wants to expand his freedom and power. And to do this, he must have knowledge.

Think of the power that man gained when he learned how to make fire, how to fashion cutting edges on stones, how to use a lever and a wheel and a bow and arrow. Man took a giant step forward in his cultural evolution when he "invented" agriculture and learned to use wooden tools and fertilizers and animal power to grow crops. And he made another leap forward when he learned to harness steam and electricity and petroleum to power machines made of iron and steel.

* * *

The great American economist Thorstein Veblen, who wrote many books and scholarly articles during the early 1900's, called technology "the life process of man." Certainly man's knowledge of how to make and use tools has played a tremendously important role in the life of man. In

the United States today, science and technology seem to dominate our lives, creating and recreating new worlds for us -- full of opportunity and promise, but also posing problems and dangers. There is perhaps no better example than atomic and nuclear energy. On one side of the coin is power; on the other side of the same coin is the bomb.

If a simple answer could ever be given to the question: Why is our economy so productive?, the answer would have to be: Because of our advanced technology. We know how to make tools and use them in production. Without modern industrial technology, we would be a nation of primitive people fighting a constant struggle for bare survival -- and many of us would lose the struggle and starve to death, as thousands do every day in the underdeveloped countries of Asia and Africa.

* * *

In recent years, technical knowledge has been increasing at a fantastic rate. According to a report published by the Joint Economic Committee of the U. S. Congress, "as much technical knowledge will be developed in the next 30 years as has been accumulated in the entire past history of mankind." As much new technical knowledge will be discovered (or produced) between 1966 and 1996 as in all the preceding thousands of years of man's existence on this planet combined. The report went on to say that we produce, in this country alone, approximately 25,000 technical papers every week, along with 400 books and 3,500 articles.

Not only is technology advancing rapidly, the rate of change is also increasing. This should not be surprising. The more knowledge we have and the more tools we have, the more ways we can combine existing knowledge and tools -- and create still more knowledge and tools! This is one of the most important principles of economic growth: Technology is cumulative (we keep adding to knowledge inherited from the past), and the pace of technological progress is accelerating. Each year in the United States we spend more than $20 billion on "Research and Development" (R & D) to assure that technical knowledge keeps on expanding to meet the needs of a growing economy.

* * *

What are the consequences of technological change? The first is to expand productivity -- our power to produce goods and services. Improvements in technology become embodied in new machines and equipment (capital goods); and through education and training, they become embodied in human resources. As the quality of capital and manpower resources improves, we are able to produce more output with a given quantity of man-hours and capital inputs.

The second effect of technological progress is to generate change. In the next section, we will focus attention on change and some of the problems that are created by technological progress. Now, let's take a closer look at the different forms that modern technology assumes and the effect of technological improvements on productivity and growth.

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In recent years a couple of synthetic terms have made their way into our vocabulary -- first cousins in the technology family, so to speak. One is automation. The other, still strange and unfamiliar to many people, is cybernation.

* * *

"Automation" comes from the words "automatic" and "operation". The term is used to describe a mechanized process of production, in which equipment is used to regulate and coordinate the quantity and quality of production. In other words, automation is the use of machines to control other machines in production. It is one step beyond "mechanization" in terms of complexity. Automation is used to provide a continuous and integrated operation for a production system.

"Cybernation" is automation plus the electronic computer. Computers, in turn, are devices that perform, very rapidly, routine or complex logical, mathematical, and decision-making tasks. Computers are used for Calculation, Control, Communication, and Data Storage. An example of cybernation is the all-purpose robot.

* * *

Some writers have suggested that a "Cybernation Revolution" has taken place, meaning that recent changes in technology are so fundamentally different from previous industrial technology that we have entered into a new era. In this evolving Cybernation Era, the muscle-power and manipulative skills that workers contributed to production in the past will cease to be valuable. Machines will take over much of the work that men and women used to do. In the future, some writers say, the only resource capabilities of humans that will have economic value will be brainpower.

* * *

Already, automated equipment has replaced men by the thousands in mining coal, weaving cloth, baking cakes, making steel, printing, oil refining, sorting bank checks, and doing hundreds of other jobs.

Fourteen glass-blowing machines, each operated by one worker, produce 90% of all the glass light bulbs used in the U. S. There is a single radio assembly line operated by two workers that produces what 200 workers formerly did. A fully automated plant in the Soviet Union manufactures aluminum pistons for heavy trucks with no manual labor whatsoever. One refinery in England processes enough crude oil in a day, using a total of six men on a shift, to supply nearly one-third of Britain's internal consumption of oil products!

Where will it all end? Will machines take over the world, and make slaves out of men? Will man be freed from toil forevermore by making wise use of machines? If manpower is no longer needed in production, what will man do with his leisure time?

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4.2 -- BENEFITS AND BURDENS OF TECHNOLOGICAL CHANGE

> "Technology has, on balance, surely been a great blessing to mankind -- despite the fact that some of the benefits have been offset by costs. There should be no thought of deliberately slowing down the rate of technological advancement . . .. The task for the decades ahead is to direct technology to the fulfillment of important human purposes . . . and seek to make work more meaningful rather than merely more productive."
>
> -- National Commission on Technology, Automation, and Economic Progress

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The above quotation comes from TECHNOLOGY AND THE AMERICAN ECONOMY, the Report of the National Commission on Technology, Automation, and Economic Progress (published in 1966 by the U. S. Government Printing Office, Washington, D. C.). The Commission was appointed in 1964 by the President of the United States, and was made up of 14 men and women representing education, business, labor, and other fields. Its job was to make a study of technological change, describe the principal effects on the economy and society, and make recommendations for programs and actions aimed at getting

the greatest benefits from technological advancements and reducing the burdens of change on displaced workers.

Why was this "Automation Commission" set up? Why did the President feel that technology, automation, and economic progress might be creating problems that required special attention?

* * *

To answer the first question, there has been a widespread feeling among the American people that the pace of technological change has been quickening. Things seem to be changing so fast that we have trouble keeping up. Products and methods become "obsolete" almost as soon as they're unwrapped and put into use. New machines are being installed almost every day, and new production methods put into practice. In the past 25 years, we have seen the introduction and spread of ball point pens, television, jet airliners, new medicines, air conditioning, transistor radios, miracle fibers for clothing, pesticides and fungicides; kitchen dishwashers, helicopters, frozen foods, space satellites, the pill, electronic computers, and the laser -- to mention only a few! (Professor Kenneth Boulding says that the extent of the "generation gap" is directly related to the rate of social and technological change.)

Second, there is a widespread public recognition -- to quote the Commission's Report -- "of the deep influence of technology upon our way of life". The American people have seen the promise of technology, and have also seen the dangers. Concern and fear have been expressed; fear of annihilation by the bomb; fear of mass unemployment; concern over air and water pollution and the destruction of our natural environment; and fear, as another author put it, that "technology has seized control of man's fate" and threatens "to destroy the essential human qualities" of man.

* * *

Let's look at some of the economic benefits of technological advancement. In the 23 years following World War II, our Gross National Product increased from an annual rate of $208 billion in 1946 to $931 billion in 1969. The market value of our output nearly quadrupled. The increase in physical output of goods and services, however, was not really this great. Inflationary price increases following World War II and during the Korean War made the dollar value of GNP increase faster than actual production increased. Nevertheless, real GNP more than doubled between 1946 and 1969, after all the proper adjustments are made for changes in the price level. The average annual increase in real GNP was about 4%.

What role did technological improvements play in the growth of our GNP? This is a very good question. Unfortunately it is not possible to

give a simple answer. The expansion of technical knowledge enables us to build better machines and design more efficient production systems. It makes workers more productive and helps businessmen increase their managerial efficiency. Technological advances make it possible to produce entirely new goods and services -- such as television sets and TV coverage of news and sporting events -- and to produce more goods and better goods.

At present, there is no satisfactory way to measure the contribution that technological progress makes to our economic growth. But we do have some economic statistics that help tell part of the story. First, we know that productivity -- output per man-hour -- increased at an average rate of 3.2% a year during the past two decades. We know that two-thirds of the growth in real GNP is the direct result of increased productivity. And we know that one of the main reasons productivity grows is because of technological advance.

Technology and productivity do not change at the same rate in every industry or every sector of the economy. Productivity growth in agriculture, for example, has in recent years been nearly double the increase for the overall economy. Fifty years ago, one farmer produced enough food and fiber to feed and clothe 8 people. Today, one farmer produces enough to feed and clothe 50 people! Agriculture has undergone a technological revolution, ranging from the use of giant harvesting combines and mechanized cotton pickers to chemical fertilizers and insecticides. Farmers are becoming so productive and efficient that they are "producing themselves out of business".

This brings us to the other side of the picture: the burdens and costs of technological advance.

Improvements in farm technology wiped out more than 4,000,000 jobs in the past 20 years. The number of employed farmers and farm workers declined from 7.7 million in 1949 to 3.6 million in 1969. Twenty years ago, one worker in seven was employed in agriculture. Today, only one-twentieth of our civilian labor force is employed in farming. Between 1940 and 1969, while the total population of the United States increased from 130 million to more than 200 million, the farm population declined from 30 million to 10 million. In the coal-mining industry, technological and economic changes reduced the number of jobs from 450,000 in 1947 to 110,000 in 1965. One reason for this massive displacement of workers was the "Push-Button Miner" -- a mechanical giant three stories high and weighing nearly 800 tons. Manned by a crew of three workers, it cuts and loads 360 tons of coal an hour!

In 1963, a committee of the United States Senate held a series of meetings to discuss "the manpower revolution". One of the businessmen who spoke to the committee -- the board chairman of a large corporation that produces automation machinery -- had this to say:

-- "From a technological point of view automation is working; but the same thing cannot be said so confidently from the human point of view. (There are many) myths about automation. The first myth

is that automation is not going to eliminate many jobs. Personally, I think automation is a major factor in eliminating jobs in the United States at the rate of more than 40,000 a week.

-- "A second myth is that automation will create jobs for workers, not only in running the machines, but in maintaining and building them. (But if workers were not replaced by automation) there would be no point in automation.

-- "A third myth that needs to be laid to rest is the belief that those who lose their jobs to automation can be retrained and put into other jobs requiring higher skills and paying more money. (But) studies have shown . . . many workers are just not retrainable, due to their levels of intelligence, education, and age.

-- "Still another myth is that workers replaced by automation in one part of the country can find jobs in other areas. The truth is that the workers thrown out of jobs are usually just those who are least able to move. They are the lower paid, the older, the unskilled. Either they cannot afford to move from an economic standpoint or they are psychologically incapable of beginning a new life in a strange area."

* * *

Where does all this duscussion leave us? Is automation good or bad for the American economy and the American people? The answer, of course, is that technological advance, automation, and cybernation have advantages and disadvantages. Automation increases our ability to produce goods and services, and it also displaces particular workers and forces people to change the way they work and the way they live. One important fact to note, however, is that automation has definitely not caused the Unemployment Rate to increase in recent years. As a matter of fact, a careful look at the economic statistics will show that the Unemployment Rate in 1969 -- after all the technological advance and automation in the 1950's and 1960's -- stood at 3.5%, the lowest level in 16 years!

* * *

We can turn back to the statement quoted at the beginning of this section for some words of wisdom and guidance regarding technological change. "The task for the decades ahead is to direct technology to the fulfillment of important human purposes . . . (and) seek to make work more meaningful rather than merely more productive." This may prove to be the most difficult challenge the American people face in the 1970's and beyond.

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4.3 -- WILL THERE BE ENOUGH JOBS FOR EVERYONE?

When workers are employed, they help produce goods and services, they earn income, and they are busy doing something that has a purpose. In contrast, jobless workers are a waste of manpower, their earnings stop, and they suffer the indignity of being judged "worthless" (at least temporarily) by the manpower market. What forces determine the total number of jobs available in our economy at any given time? In a job-oriented, market economy like ours, the question posed by this section is of great importance to all potential workers and members of their families.

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As we indicated, during the late 1960's the American economy was close to "full employment". In 1969, 78 million men and women were employed in civilian jobs (plus 3½ million in the armed forces), and only 2.8 million workers -- 3.5% of the labor force -- were jobless. Because we were so close to full employment, the economy was said to be operating virtually at Full Production.

By contrast, in the recession year of 1958, there were 5 million unemployed workers in the U. S. economy, and the unemployment rate averaged 6.8%. Newspapers and magazines were filled with pictures and stories describing problems of the unemployed. The situation reminded older workers of the Great Depression of the 1930's, when 13 million workers at one time were jobless -- 25% of the labor force!

* * *

We know that unemployment causes economic waste: idle manpower contributes nothing to the GNP. Moreover, families are deprived of food, clothing, and other necessities when the breadwinner has lost his job and earnings. We know also that a worker has a feeling of personal frustration, humiliation, and failure when he wants work, is willing and able to work, but can't find a job.

In this section let's find out what economic theory has to say about the very important question: What causes unemployment? In an economy where wants are virtually unlimited and manpower is "scarce", why is it that workers go without jobs? We can begin by reviewing the Circular Flow of Economic Activity, as it appears in modified form in Chart I on the next page.

Chart I. TOTAL SPENDING AND TOTAL EMPLOYMENT IN OUR MARKET ECONOMY

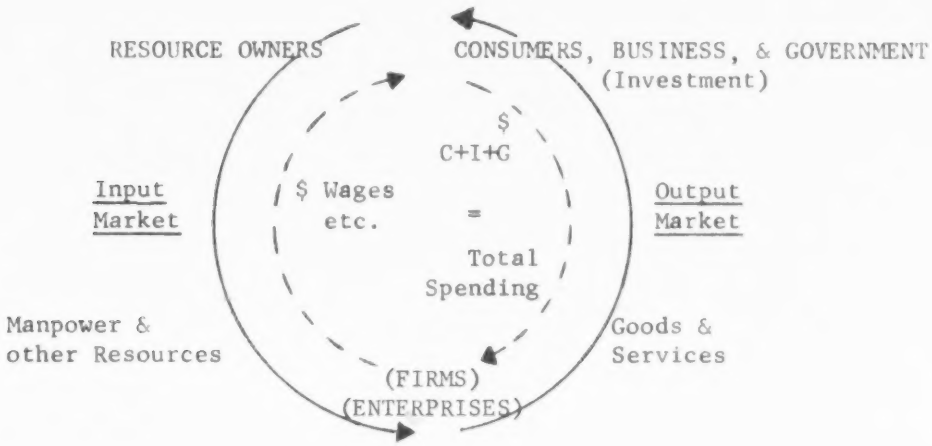

Chart I shows that goods and services are produced for sale to Consumers (and also to Business Firms and Government). When Total Spending (effective demand in the market) goes up, Firms are able to sell more goods and services. But they can't sell more unless they produce more. Since there's no such thing as a free lunch -- it takes inputs to get more output -- Firms must employ more manpower, capital, and natural resources. Thus, increased spending in the output market leads to increased employment in the input market (and increased production). Note, however, that there is a limit to this power of spending to create jobs and output. When all, or nearly all of our manpower and other resources are employed, additional spending can't create additional jobs and output. The upper limit to our Gross National Product is reached in the short run when we have achieved "full employment" of available resources -- generally indicated by an unemployment rate of around 3% of the labor force.

There is a very simple way to summarize this theory of total employment:

$$E = f(C+I+G),$$

which means that Employment (total number of jobs in the economy) is a function of (depends on) Total Spending (effective market demand) for Consumer goods plus Investment goods plus Government's purchases of goods and services. You will recognize that "Total Spending" is the same thing as GNP: the sum of Consumption, Investment, and Government purchases (plus Net Exports, which we shall ignore here). Therefore, what this means is that total employment is determined by the level of GNP spending! The more total spending by Consumers, business Investment, and Government, the more job opportunities there will be in the economy. Recalling the question that was posed in the title of this section, we can conclude that (except for frictional and structural employment, which are caused by other factors):

-- there will be enough jobs for everyone if total spending is high enough to justify using all the available resources in production.

-- there will not be enough jobs for everyone if total spending in the market is too low.

-- if total spending is too high, there will be serious disruptions in the manpower market and the entire economy because of inflation.

* * *

The subject of employment is a very broad one indeed. Many books have been written to try to explain the causes of employment and unemployment, and we can't expect to study all of the important ideas about employment. However, there is one additional issue, raised in the previous section, that we want to consider: the prediction of mass unemployment caused by automation and cybernation. Will machines gobble up all the jobs, and force tens of million of workers into the ranks of the unemployed? If so, when?

In 1964, a small group of Americans formed a committee and wrote a memorandum to the President of the United States. It was called the "Memorandum on the Triple Revolution", and it called attention to the fact that important changes were taking place in the fields of Weaponry (atomic and nuclear weapons), Human Rights (the civil rights movement by Negroes), and Cybernation (technology and economic life).

Writers of the memorandum claimed that we were entering a new period of economic life in which machines will do most of the work and tens of millions of men and women will be unable to find jobs -- perhaps as early as the 1970's! They urged the American people to plan ahead for these revolutionary changes brought on by cybernation, so that we could learn to accept a world where most people do not have jobs. Among other things, we would have to figure out a new system for distributing the nation's abundance of goods and services -- without relying on employment and earnings to determine how much income each person and family would receive.

Public reaction to the Memorandum on The Triple Revolution has been varied. Many people agree with the writers that machines are causing revolutionary changes in our economic life and automation is destroying millions of jobs. Other people say that this might happen a hundred years or so in the future but isn't happening now. They point out the fact that total civilian employment in the U. S. is at an all-time high. Unemployment rates by the end of the Sixties were at the lowest level in 15 years, right at the time when cybernation supposedly is destroying so many millions of jobs. Why? In part because many new employment opportunities are being created in the service fields, such as teaching, medical care, and recreation.

Indeed, as economists have begun pointing out, the U. S. economy has become a "service" economy, with employment and production structured quite differently from the old "goods" economy. Rising incomes in an affluent society typically are spent to purchase services -- both through the private sector and through government -- and our methods of producing services are not so highly automated as automobile assembly plants, food-processing establishments, and the like.

With so many human wants still unsatisfied, it is difficult to imagine a world of mass unemployment. Still, the fundamental message of the Triple Revolution remains: Our society must look to the future and continuously reexamine the values and institutions upon which we have relied for organizing our economic life. As technology advances and income grows, new and better ways must be found to pursue the goals of full production, stable growth, freedom of choice, equality of opportunity, security, economic justice, and international balance -- as well as to define and pursue new goals desired by the people who make up our society.

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4.4 -- THE CAUSES AND COSTS OF UNEMPLOYMENT

The total demand for labor and the total supply of labor are never exactly equal. Supply and demand for particular kinds of workers do not balance. In the giant U. S. economy there will always be some unemployed men and women in the labor force. Why? and How many? What are the causes of unemployment? What are the consequences? Is unemployment a major problem in the U. S. economy? Answers to these questions are important because they will help you understand the dimensions of the unemployment problem and the policies and programs designed to deal with it.

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Do we have an unemployment problem in the United States? Let's examine some unemployment data for the 20-year period 1947-1966 and see what some of the facts are.

The total number of people in the vivilian labor force (16 years and over) who were unemployed during these two decades ranged from a high of

5 million in 1961 to a low of under 2 million in 1953. In over half the years between 1947-1966, more than 3 million men and women in our labor force were unemployed. The annual unemployment rate (number unemployed as a percent of the civilian labor force, averaged for each year) during the period 1947-1966 ranged from a high of 6.7% in 1961 to a low of 2.9% in 1953. Except for five post-war and Korean War years (1947-48 and 1951-53) the unemployment rate was never below 4% until 1966. For eight straight years (1958-65) the unemployment rate was 5% or higher.

In 1933, the worst year of the Great Depression, the number of unemployed workers reached 13 million, or 25% of the labor force. During the height of World War II -- 1944 -- only 670,000 thousand workers were jobless and the unemployment rate dropped to an all-time low of 1.2%.

Among the consequences of unemployment are: lost output (in 1960-61, underutilization of the nation's resources cost the American people about $50 billion in GNP, enough to provide two and one-half million families with new, $20,000 homes); lost earnings for unemployed workers (depriving their families of adequate income for consumption and economic security); and a variety of human problems (such as social and psychological frustration, erosion of manpower skills, blockages to human development, and the like).

* * *

Now let's examine the causes of unemployment. Why are some workers jobless, even though they are able and willing to work? Here is what a recent survey of unemployed workers revealed:

-- A coalminer in his early thirties was unemployed as a result of the closing of one of the few remaining mines in his area.

-- A single woman in her fifties, out of a job for two months because the company she worked for merged with another firm.

-- The former owner of a small retial business which had failed, looking for work as a salesman in his field.

-- A 47-year-old electrical engineer, with more than 20 years of work experience laid off (involuntary separation from employment through no fault of worker for an indefinite period of time) by a West Coast plant with declining orders from the U. S. Defense Department.

-- A teen-age Negro, just arrived in a large northern city from a rural area, who had signed up with the local office of the state employment service looking for unskilled work.

-- A 54-year-old family man given a layoff notice a month earlier by a medium-sized machine-tool plant, hopeful of being called back to work any day.

There are several different ways to classify the causes of unemployment. The classification system most frequently used includes four types of unemployment: Frictional, Seasonal, Structural, and Cyclical unemployment. We will define each one of these types of unemployment and indicate its importance in the total unemployment picture.

The term "frictional" unemployment describes the joblessness caused by the imperfect working of the manpower market itself. Even if the total demand for labor is high, it takes a while before workers show up at the right time, in the right place, and with the right skills needed to fill the available jobs. This type of short-term unemployment is caused by the normal "frictions" that exist in a free manpower market. In the typical case of this kind of unemployment, some time lag is almost bound to occur before the worker and the job get together. Part of this unemployment is unavoidable in an economy as big and complicated as ours.

Let's examine some of the evidence for the presence of frictional unemployment. You will recall that even during the height of World War II there was an unemployment rate of 1.2%. Since 1929, there has been only one other year -- the Korean War year of 1953 -- when the unemployment rate was below 3%. We might conclude then that something in the range of 1% to 3% of our unemployment rate must be frictional in nature since it is the lower limit even during times when there is the greatest demand for workers.

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A second type of joblessness is seasonal unemployment which is seen in the high unemployment rates for farm and construction workers in the winter and the low rates in the summer; the low unemployment rate in retail trade before Christmas and Easter; and the high unemployment rate in the automobile industry during the late summer and early fall when model changeover time arises. Unemployment among the various different types of workers in industries affected by seasonal forces usually tend to be for a short period of time. However, where the seasonal period is long and adult males make up the bulk of the work force (as in the construction industry) seasonal unemployment can account for a large part of the unemployment picture in the industry. Seasonal unemployment is sometimes included under the broad heading of frictional unemployment rather than being treated as a separate category.

* * *

Structural unemployment is joblessness brought about by deepseated structural changes in the economy -- changes in the patterns of demand for and supply of workers. The impact of automation and technological change, the changing geographical location of American industry, the exhaustion of

natural resources, major changes in the size and composition of the population, and changes in the types of workers needed and the industries needing them -- all these are examples of structural changes in the economy that can cause unemployment, especially long-term joblessness. Because of the fundamental and drastic nature of many of the changes, structural unemployment is the most difficult type to deal with.

Technological advance and automation provide a dramatic illustration of what is happening to jobs in our changing economy. It is estimated that every year 2.3 million jobs are affected by technological change. During the decade of the 1970's, more than 20 million jobs will either be altered or eliminated by technology. (Meanwhile, of course, new jobs will be created.)

Some well-known examples of structural changes which have created unemployment problems are: the decline in the mining of bituminous and anthracite coal in Pennsylvania, West Virginia, and Kentucky (along with a change to labor-saving methods); the shift from steam to diesel railroad locomotives; the exhaustion of high-grade iron ore deposits in the Mesabi range in Minnesota; the geographical shift of much of the cotton textile manufacturing industry from New England to the Southeastern part of the United States; increasing productivity in agriculture (making it possible for fewer farmers to produce more output of farm products); installation of automated equipment in the automobile industry; reduced demand for unskilled labor; and the shift from being predominately a nation of goods-producers to that of being basically service-producers.

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As the name implies, cyclical unemployment is caused by periodic cycles (changes or fluctuations) in the total level of economic activity. When the total demand for the economy's goods and services declines, as we pointed out in the preceding section, so does the demand for workers to produce those goods and services. Thus, the amount of unemployment increases when the business cycle is on the downswing (and vice versa). A "business cycle" is a way of picturing total business activity over a period of time. A cycle has five phases of business activity: expansion or prosperity; peak or "boom"; recession or contraction; trough or low point; and recovery leading once again to prosperity. When the peak of business activity is passed, and the business cycle is on its downward path, the unemployment rate rises quite sharply. Unemployment reaches its highest level near the low point of the business cycle and stays high for several months after business activity begins to increase again.

What can be done about the cyclical type of unemployment? Essentially, the solution is implied by the analysis of the cause. If unemployment is caused by insufficient spending for goods and services in the market -- that is, not enough Consumer expenditure, business Investment spending, and Government purchases of goods and services -- then the logical solution to the problem is to increase some combination of Consumption, Investment, and Government spending. In carrying out its stabilization function, government can cut taxes, thereby leaving more spendable money in the hands of

consumers and business; or government can increase its own spending, obtaining the necessary money either by borrowing, raising taxes, or (theoretically, at least) "creating" money.

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Many of the social tragedies of unemployment arise out of the fact that the burden of joblessness -- whether caused by insufficient aggregate demand or by structural factors (let's forget frictional and seasonal unemployment for now) -- falls disproportionately on particular workers and their families. For example, a 4% Unemployment Rate may not seem terribly serious for the American economy as a whole but for the particular workers who have no jobs and no earnings, the situation is painful. And the fact is that people with certain characteristics are singled out time after time to bear the burden of unemployment.

The Unemployment Rate (UR) for Negro workers is consistently double the rate for white workers. For young workers, regardless of race, the UR is about triple the rate for the labor force overall. Women consistently have higher unemployment rates than men. Workers lacking a high school diploma have unemployment rates double those of high school graduates. Workers in the lower-skilled occupations have higher rates of unemployment. In 1969, for example, the UR for unskilled nonfarm laborers was 6.7%, while the rate for craftsmen and foremen was 2.2% and for professional and technical workers it was 1.3%.

A profile of the unemployed reveals that the risks of unemployment are highest for the nonwhite, unskilled, young, school dropout, and women.

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4.5 -- MONEY, INFLATION, AND THE "TRADEOFF" POLICY DILEMMA

A recurring problem in the U. S. economy is INFLATION, which is defined as a reduction in the purchasing power of money resulting from a rise in the general level of prices. Recent experience indicates that it is extremely difficult to achieve simultaneously the goals of full employment and reasonable price stability.

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Virtually everyone in the United States knows the importance of money, even if he has never read a book on the subject or taken an economics course in high school or college. But not everyone understands the nature and functions of money, nor do they really comprehend what is meant by "inflation". In this section we shall consider very briefly the topics of money and inflation and try to clarify a public policy issue that assumed crucial importance in the late 1960's, as it had in the late 1950's: the tradeoff dilemma involving unemployment and inflation.

* * *

Money is defined as anything that is widely accepted in payment for goods and debts. The most familiar form of money in the U. S. is Federal Reserve Bank paper currency, and coins issued by the U. S. Treasury. On the other hand, the most important form of money is demand deposits, or checkbook money. About three-fourths of the total money supply (which equaled $200 billion in 1969) consists of demand deposits, a form of money which is widely accepted in payment for goods and debts.

Money performs several very useful functions in the economic process. As we have seen in the circular flow model, money serves as a medium of exchange: consumers trade money for the goods and services they buy in the market; business firms trade money for the resources they employ in production. Money is the principal medium of our economic communication system: it is what we spend to purchase goods and services, the form in which we typically receive our income, and what we "vote" with to express preferences and demands in the marketplace. Money also serves (imperfectly) as a store of value, as a unit of account, and as a standard for deferred payments (i.e., a form in which we express our promises to pay in the future).

The value of money is determined by what can be purchased with it. The dollar is not "worth a dollar" because we have $15 billion or $20 billion of gold at any given time stored at Fort Knox, Kentucky, or in Federal Reserve Bank vaults, or even because the federal government says it is worth a dollar. The value of the dollar is determined by the quantity of goods and services that can be obtained in exchange for a dollar. And this, of course, depends on the prices at which goods and services are sold.

When the general level of prices goes up -- e.g., when the Consumer Price Index (CPI) rises by, say, four percentage points -- the purchasing power or value of money goes down. There is an inverse relationship between prices and the value of money. Between the base period 1957-59 and the year 1969, the CPI actually went up from 100 to 127.7. This means that in 1969 it took $1.28 to buy the same "bundle" of goods and services that could be bought in 1957-59 for only $1.00. The value of the dollar declined over this 11-year period from a full 100¢ to only 78¢ (i.e., the 1957-59 index of 100 divided by the 1969 index of 128 equals .78).

Because of inflation, a worker who earned $80 per week in 1959 and had managed to get this raised to $96 per week in 1969, nevertheless would find that his real income (actual purchasing power) had gone down over the decade. Why? Because inflation had reduced the purchasing power of the dollar by 22% while the number of dollars the workers earns went up by only 20%!

When inflation occurs it is absolutely essential for purposes of economic understanding that dollar values -- such as GNP, Personal Income, Average Weekly Earnings -- be "deflated", or adjusted to reflect changes in the value of money. It would be dangerously misleading to compare income data expressed simply in terms of "current prices" (note the case of the worker above) because the size of the "measuring stick" itself (the real value of a dollar) changes during periods of inflation. A simple formula can be used to adjust economic data for price-level changes:

$$\frac{\text{Price Index in Base Year}}{\text{Price Index in Current Year}} \times \frac{\text{Income Data in Current Year}}{1} = \text{Current Year Data Expressed in Base Year Prices}$$

Thus, if the Price Index in the base year (say, 1940) is set at 100, and the Price Index rises to 200 by the year 1950; and if GNP in current prices was $300 billion in 1940 and $400 billion in 1950, then real GNP would have declined by $100 billion between 1940 and 1950, expressed in 1940 prices.

$$\frac{100}{200} \times \frac{\$400b}{1} = \$200b \qquad \text{and} \qquad \$300b - \$200b = \$100b$$

* * *

We have sketched briefly the nature of money and inflation. Now consider the question: Why is inflation considered to be a problem? The answer lies in an identification of the consequences of inflation. This is a vast subject, and we shall mention only three consequences in the present discussion. First, inflation has the effect of altering the distribution of real income; because not everyone's current money income changes at the same rate, but the prices consumers have to pay in the market do change at the same rate (roughly speaking) for all. People with fixed (or relatively inflexible) incomes suffer because the purchasing power of their dollars is declining while the quantity of their dollars remains unchanged. Second, inflation has the effect of distorting decisionmaking and economic activity in a variety of ways, many of them harmful in terms of the goals society sets for the economy. Third, when inflation gets under way, the federal government feels compelled to pursue policies aimed at halting the rise in prices. And the fact is, some of those policy actions create unemployment.

In the most simple terms, it can be shown that inflation results when there is too much spending relative to the economy's capacity to produce goods and services. (Two other causes of inflation, cost-push and structural, will not be described here.) Solution? Government can take restrictive action (e.g., raise taxes, reduce government expenditure, "tighten" money and credit) to induce a cutback in total market spending. But a real reduction (or deficiency) in market demand is precisely what we have identified as a major cause of unemployment. And here lies the dilemma: Should the goal of full employment be sacrificed in order to stop inflation (i.e., to pursue the goal of reasonable price stability)? If it should, then how much unemployment should we trade for how much price stability? And what specific policy action should be taken to bring about the desired results -- and to ease the burden on the people who suffer from the consequences of these policy actions: the unemployed and the ones who are injured by inflation?

Again, just as money and inflation are economic questions whose complexities go beyond the scope of this Primer, stabilization policy is too vast a topic to analyze here. Let us merely recognize that a broad array of policy instruments is potentially available -- including fiscal policy, monetary policy, wage and price guideposts, direct controls -- and it is a challenge to the American people and their representatives in government to determine which combination of policy actions is in their best interest, both in the short run and in the long run.

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4.6 -- INEQUALITY, LOW INCOMES, AND POVERTY

Despite the trillion dollar annual production of the U. S. economy, 25 million Americans remain poor -- with incomes that fall below the official "low-income" standards of the Social Security Administration (approximately $4,000 a year for a 4-person family). Although there are twice as many White persons below the poverty line as there are low-income Negroes, the incidence of poverty is three times as great for Negroes as for Whites. Redistribution of only 1% of our annual Gross National Product would close the poverty-income gap for everyone in the nation.

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"The outstanding faults of the economic society in which we live are its failure to provide for full employment and its arbitrary and inequitable distribution of wealth and incomes."

-- John Maynard Keynes, The General Theory of Employment, Interest, and Money (1936)

The quotation from Keynes (rhymes with "rains", not "beans") is especially interesting in view of the fact that the famous English economist (who has been ranked with Adam Smith, Karl Marx, and Thorstein Veblen as the world's greatest economists) was himself a millionaire described as an "upper-crust snob". He wrote in the concluding chapter of his classic treatise, "There is social and psychological justification for significant inequalities of incomes and wealth, but not for such large disparities as exist today."

What are the magnitudes of disparity that exist, and does Keynes' statement apply as much today as it did 35 years ago?

Table 4.6-1 PER CENT OF AGGREGATE FAMILY INCOME RECEIVED BY EACH QUINTILE AND TOP FIVE PER CENT IN SELECTED YEARS

Families ranked by income	1969	1957	1947	1941	1935-36	1929
Total, 100%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Lowest 20%	5.6	5.0	5.0	4	4.1	13
Second 20%	12.3	12.6	11.8	10	9.2	
Middle 20%	17.6	18.1	17.0	15	14.1	14
Fourth 20%	23.4	23.8	23.1	22	20.9	19
Highest 20%	41.0	40.5	43.0	49	51.7	54
(Top 5%)	(14.7)	(15.7)	(17.2)	(24)	(26.5)	(30)

SOURCE: Income in 1969 of Families and Persons in the U.S., U.S. Bureau of the Census, Current Population Reports, Series p-60, No. 75, December 14, 1970; Historical Statistics of the U.S.; and Hearings on the Economic Opportunity Act of 1964.

The above table shows the pattern of income distribution among families over a 40-year period. Between 1936 and 1947, a significant reduction in inequality occurred, with the bottom 40% of families increasing their share of the nation's income from 13.3% to 16.8% and the top 20% of families experiencing a reduction from 51.7% of total income down to 43.0%. The highest 5% of families took a sharp cut from 26.5% to 17.2% of total income. During the past 25 years little change has taken place in the pattern of income

distribution in terms of quintiles (i.e., fifths, or groups containing 20% of the total) and even the top 5%.

Substantial inequality in the distribution of income exists whether we look at Personal Income (before federal individual income tax) or Disposable Income (after federal tax). According to a study of 1962 incomes, the lowest quintile received 4.6% of aggregate income before tax and 4.9% after tax. The second fifth of families got 10.9 % before and 11.5% after. For the middle quintile it was 16.3% and 16.8%; for the fourth quintile, 22.7% and 23.1%; and for the highest 20% of families, the share of total income was 45.5% before tax and 43.7% after federal income taxes.

What is the connection between inequality and poverty? According to the Census Bureau, the cutoff line for the lowest quintile in 1969 was $5,000 -- about $1,000 higher than the official poverty-income threshold for a 4-person nonfarm family -- which means that all the poor people in families (disregarding for the moment unrelated individuals) were in the lower levels of the lowest quintile. The 10 million families at the high end of the income scale had more than eight times as much income in the aggregate than the 10 million families at the low end. (In 1969, there were 51 million families in total, or approximately 10 million families in each income quintile.) Median family income in 1969, incidentally, was $9,433; half the families had incomes above and half were below that level for the year.

Data on wealth distribution reveal an even greater pattern of inequality. A widely-quoted study by University of Wisconsin economist Robert Lampman showed that in 1953 the top 1.6% of adults held 30% of the nation's personally-owned wealth, including 80% of all corporate stock and virtually all state and local bonds.

Whether the above data indicate that a "problem" exists in the U. S. with respect to income distribution depends on our values and perceptions. Many political leaders, writers, and other Americans have expressed deep concern in recent years over the paradox of poverty amid economic abundance in the United States. Michael Harrington's 1962 book, The Other America, poignantly described the deprivation and misery of millions of low-income Americans existing, as if in an invisible world, side-by-side with the affluent majority. In 1964, the Congress passed the Economic Opportunity Act, declaring a war against poverty, the objective of which was "to eliminate the paradox of poverty in the midst of plenty in this Nation". The stark contrast between the 25 million poor persons and the 175 million non-poor was further dramatized late in 1970 when the gross national product of the U. S. reached an annual rate of one trillion dollars, or nearly $5,000 of goods and services produced for every man, woman, and child in the nation.

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In Chapter II, we described a five-step method of economic reasoning that can be used in analyzing the issue of poverty in America. It involves taking a rational, empirical, comprehensive view of the problem, of our

social goals, the courses of action available to us as a nation, the probable consequences of alternative courses of action, and the policy action we choose to adopt in light of our stated goals. Because the issue is complex and space limited, only a capsulated analysis will be presented here.

Step #1 -- Define the Problem. Despite our trillion-dollar economy, some 25 million Americans have incomes that fall below the official Social Security Administration poverty lines (or "low-income levels" as they have begun to be termed): $4,000 in 1970 for a 4-person nonfarm family, raised or lowered approximately $600 per person for larger or smaller families, and reduced by 15% for farm families (on the assumption that they can grow part of their own food supply and therefore require less cash income). Meanwhile, Personal Income per capita (aggregate income received by persons during the year, divided by total U. S. population) amounted to nearly $4,000 -- or $16,000 for a 4-person family. The fact that 25 million persons are counted among the poor indicates that their per capita earnings from employment, property income from ownership of land and capital, and transfer payment (public assistance, social insurance, or other cash income) all lumped together amount to less than one-fourth of the per capita personal income of the American people.

Of the 25 million poor persons (13% of the total U. S. population), about 17 million are White (10% of all White persons) and 8 million are Negro and Other Non-White Races (32% of that population group). More than 10 million poor persons are children under 18 years, and another 5 million are 65 years and older.

Historically, the poor have always been with us, but not in the same numbers. Between 1950 and 1970, the incidence of poverty (poor persons divided by total population) declined from 32% to 13%, and the number of persons falling below the poverty-income line declined from 40 million to 25 million. (However, using a flexible poverty standard -- viz., less than 50% of the nation's median family income -- the incidence of poverty remained unchanged at a figure of 20% between 1950 and 1965.) The Census Bureau reported that the median income deficit among poor families was about $1,100 in 1970 and it would take $11.4 billion to raise the incomes of all poor families and unrelated individuals above the poverty line -- slightly more than 1% of GNP.

Economic theory doesn't shed much light on the nature, causes, and consequences of poverty. Consumer budgets have been devised ("economy", "low-income", "moderate", "lower standard", and "higher standard") but they are subject to criticism on a number of grounds including their alleged arbitrariness. The marginal productivity theory of wages teaches us that a person will be employed as a worker only if he is productive enough (when used in combination with land, capital, and other human resources) to add to the revenues of the business firm an amount equal to or greater than the wage that the employer must pay him (as determined by competition, union contracts, or minimum wage legislation). Unemployment, low wages, and poverty thus are the result of low productivity of workers. Nothing is mentioned in this theory about persons who are not in the labor force, such as children and the aged.

Lest economists be accused of narrowness and insensitivity a brief note must be added to this section on "Defining the Problem" that acknowledges the psychological dimensions of poverty. What is poverty? We have been assuming an economic definition: an insufficiency of income to buy the goods and services necessary for a decent level of living in contemporary U. S. society. But the real meaning of poverty may lie in the feelings of hopelessness, helplessness, and isolation that certain low-income people suffer. Insufficient income is only one aspect of "powerlessness". However, there can be no question that economic deprivation is terribly painful in an affluent society where status is largely determined by one's income -- and poverty is still regarded by some as proof of biological inferiority or weak character. The concept of a "culture of poverty" has been described by anthropologist Oscar Lewis, and a burgeoning literature on the non-economic aspects of poverty is becoming available. Indeed, difficulties in answering the question: "What is poverty?" apparently are among the factors causing social scientists and government agencies to abandon the term "poverty" altogether and speak only of the "low-income population".

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Step #2 -- Identify Goals. Although this step is perhaps the most subtle and complex in the whole analysis, we shall deal with it succinctly. Americans have long advocated equality of opportunity, freedom of choice, the dignity and supreme importance of the individual, distributive justice, economic security, and a family of related values. These values serve as criteria of choice in the selection of social goals, such as the elimination of poverty (recall the policy declaration of the Employment Act of 1964).

We are on record advocating the goal of poverty elimination. But here is where the complexity enters: the nation can't simply leap from a situation where poverty exists for 25 million of its citizens to a condition where poverty is eliminated. "Do not show the goal without the way", philosopher Ferdinand LaSalle warned, "for way and goal on earth are so entwined that each upon the other's change depends, and different paths lead into different ends." When it comes to selecting the means of poverty elimination -- actual programs and actions -- other values (such as the so-called Protestant Work Ethic) stand in the way, and consensus is thwarted. The values, beliefs, perceptions, ideology, attitudes, and life style of the poor differ in certain respects from the nonpoor. Who will change? When a specific approach or combination of ways to eliminate poverty is adopted conflicts emerge and action is stalled. Indeed, it may be true that until we find a way to resolve value differences we shall find no solution to the poverty problem, or the environmental problem, or the general problem of the quality of life. For present purposes, however, let's take the language of the Economic Opportunity Act seriously and agree that our goal is to eliminate poverty.

* * *

Step #3 -- Consider Alternative Courses of Action. A truly comprehensive approach to policy analysis dealing with the problem of poverty amid affluence in the U. S. would adopt the attitude: "Anything goes",

from repealing the laws of private property and distributing income on the basis of equal shares per head, to liquidating all persons below the poverty-income line by using the lethal device of their choice. Again, in this brief treatment, we describe only some "liberal-conservative" alternatives classified according to whether they represent a "market" approach (involving payment either for work performed or for making non-human resources available in production); or a "non-market" approach (channeling real income to the poor -- in the form of cash transfers, goods and services in kind, or vouchers -- by means of tax reduction, social insurance programs, public assistance, or some variation of Basic Independent Income).

Personal Income in 1970 amounted to $801 billion, three-fourths of which was accounted for by payments to human resources; approximately 15% by dividends, interest, rent, and profits of unincorporated enterprises; and nearly 10% by transfer payments (i.e., unilateral cash payments, mostly by government, for which there was no corresponding flow of goods or services during the year). One way to eliminate poverty would be to make everybody in the country a capitalist -- and let him live off his dividends, rent, interest, and profits. This system of "people's capitalism"has been advocated by some businessmen and writers, but appears not to rank high in feasibility at present. The other market approach to providing the poor with more income centers around jobs and earnings. Those who counsel their fellow citizens (sometimes on the bumpers of their cars) to: "Join the war against poverty -- get a job!" have a point. But several questions arise:

-- Should children under age 18 be working to support themselves?
-- Should men and women 65 and over be participating in the labor force?
-- Should mothers of young children seek employment while somebody else assumes the child care function?
-- Is it reasonable to expect physically and mentally handicapped men and women to find and hold good jobs?

As a matter of fact, studies have shown that approximately one-third of all poor families are headed by a full-time, year-round worker whose wages are so low that even working 40 hours per week, 52 weeks in the year, his total earnings still fall below the poverty line. About half of the poor families are headed by persons (many of whom are mothers of young children) not in the labor force. And a recent study disclosed that only about 1% of the nation's 10 million welfare recipients are able-bodied men, thereby eligible to "join the war against poverty by getting a job".

Next there is the question of whether enough jobs exist in total, in the right occupations, industries, and geographic locations to match the available workers. It is generally agreed that the number of poor persons rose by 1.2 million persons between 1969 and 1970 primarily because the unemployment rate increased from 3.5% to 4.9% (annual averages) and the Gross National Product declined in real terms by $4 billion, falling far below its potential level.

What these data suggest is that policies might be undertaken to aid some of the poor by increasing the DEMAND for manpower, improving the quality of manpower SUPPLY, and increasing the efficiency of the manpower

MARKET. Adequate fiscal and monetary policies, supplemented by a modern "incomes policy" can help bring the unemployment rate for the nation down to something like 3%-4%. Job creation (e.g., through economic development plans, public service employment, jobs for disadvantaged workers, etc.) can provide some of the poor with employment and earnings opportunities. These programs work on the demand side of the manpower market.

Turning to the supply side of the market, what alternative courses of action might be pursued to raise the incomes of the poor? Manpower development and training programs, access to schooling, health and nutrition programs, counseling, helping workers relocate to where the jobs are, supportive services, and a host of other "investments in human capital" can and are being used to increase the employability, employment, productivity, job tenure, and earnings of low-income men and women who enter the labor force.

Focusing on the structure and operation of the manpower market itself, programs can be implemented to reduce discrimination against minorities (and women), increase the flow of job information, improve public transportation and child care systems, and the like. These actions create a more favorable socio-economic environment for bringing potential manpower demand and supply into balance at high enough levels to help squeeze out a portion of the nation's poverty.

Not all Americans own resources (including sufficiently productive labor power) that can be exchanged in the market for a non-poverty income, nor is it reasonable to expect that all Americans will acquire such resources. A residual pool of poor people will exist, and how many of America's 25 million poor fall into this category is uncertain. Non-market strategies for eliminating poverty, therefore, may be necessary for some part of the low-income population and indeed may be preferable to market approaches for the entire group of poor and potential poor. These non-market strategies (which do <u>not</u> involve paying people for work done or for the use of non-human resources) may be classified under three major headings:

1 -- Cash transfers
   a) Social Insurance (e.g., OASDHI and Unemployment Insurance)
   b) Public Assistance (e.g., AFDC and Old Age Assistance)
   c) Basic Independent Income (discussed below)

2 -- In-kind goods and services (e.g., medical care, surplus food distribution)

3 -- Tax reductions (e.g., sales and property tax exemption or refunds for persons designated as poor)

All of the above have been tried (though not necessarily in the optimal form at optimal levels) with one exception: Basic Independent Income. The basic rationale of this anti-poverty program is to provide every citizen in the nation a <u>basic</u> level of income that is completely <u>independent</u> of his employment, ownership of nonhuman resources, demonstrated need, qualification for a social insurance program, or any other traditional criterion. The program, proposed two decades ago by economist C. E. Ayres and others, is not designed to

cure poverty but to prevent it. Millionaires along with persons of modest income would receive the B. I. I. (weekly, biweekly, or monthly), the payments would be included in taxable income, and of course people with higher incomes (derived from work or investments) would pay higher taxes. The economic case for a Basic Independent Income is simple: in a trillion dollar economy of abundance, why deprive millions of our fellow citizens of the goods and services they need to maintain a decent life? In a market-type economy, why tolerate unemployment due to insufficient aggregate demand when a lack of purchasing power is the only constraint that prevents millions of consumers from increasing their spending? Why let a family or unrelated individual fall below the poverty line and then activate programs to raise him up again, when poverty can be prevented by setting a floor under the household's income in the first place?

Variations on the B. I. I. plan have been widely discussed in recent years including the Guaranteed Annual Income (not the same as a Guaranteed Annual Wage), Negative Income Tax (really a way of administering a guaranteed minimum income), and President Nixon's proposed Family Assistance Plan (limited to families with children and conceived as a welfare reform program limited to the poor). Rough estimates have been made of the benefits, costs, and other effects of a Negative Income Tax plan that would eliminate poverty (in the sense of raising the annual income of each household above the official low-income lines). Such a program would cost $25-$30 billion, $11 billion of which would go to the poor (completely closing the poverty-income gap) with the remaining $14-$19 billion being paid to the near-poor and other households above the low-income lines. The reason for this spillover of benefits is to preserve work incentives and equity by allowing persons who are employed to retain 50% of their earnings (up to the break-even level specified in the plan) rather than lose a full dollar of negative tax benefits for each dollar of earnings. The indirect benefits and other effects presumable would include improved health, education, social attitudes, consumer wellbeing, etc., as well as a reduction of crime, dependency, and other forms of social pathology. Some people fear that the plan might also induce a number of persons to live "on the dole" without bothering to seek employment.

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Step #4 -- Analyze the Probable Consequences. It is one thing to think up a scheme for eliminating poverty and quite another to assess carefully the likely benefits, costs, and other effects associated with its implementation. But without such information, how can a rational choice be made among alternatives? It was suggested earlier that value conflicts have placed obstacles in the path of our efforts to eliminate poverty. Knowledge gaps also create obstacles. So long as we are in the dark about the benefits (private and social), costs (financial and otherwise), and other effects (e.g., on our "moral fiber") of antipoverty programs, we are unlikely to produce a consensus and all-out commitment to achieve the goal of poverty elimination. This is not to argue that we should delay our efforts to end poverty until "all the facts are in"; but the lack of systematic social experimentation, program evaluation, and even reliable program description denies us the information that could help bring about more rational decision making. Happily the situation is changing: the New Jersey work incentive experiments, the Office of Economic Opportunity's new research emphasis, improved methods of

evaluating manpower programs sponsored by the U. S. Department of Labor, and other social science efforts may shed more light on the consequences of alternative approaches to eliminating poverty, thereby helping destroy old myths and perhaps producing new consensus.

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Step #5 -- Choose the Best Course of Action. There is no "right" way to eliminate poverty, and there is insufficient knowledge of benefits and costs to point unmistakably toward a "best" course of action. But careful analysis reveals certain facts about the problem of poverty amid affluence, suggests feasible alternatives, and generates useful approximations concerning the effects of various alternatives. Whatever choice individual citizens make, they almost certainly will have to stand ready to adjust their proposed strategies in light of actual experience. Thus, the rational-empirical-comprehensive method of policy analysis is a continuing process of experimentation, discovery, and revision. Meanwhile, some form of war against low incomes or poverty will go on, waning at times when such issues as Indo-China, ecology, and inflation capture the public's mind, and then regaining priority once again when the sensitivity of the majority non-poor is somehow stimulated into compassionate social action.

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4.7 -- INTERNATIONAL ECONOMIC RELATIONS

As the world's biggest producer and consumer, the U. S. economy has special problems as well as opportunities in dealing with other nations. Exports and imports, international finance, foreign investments, balance of payments equilibrium, relations with less developed countries, and the rivalry between capitalism and communism all serve to complicate U. S. economic life.

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This Primer deals almost entirely with the U. S. economy as a "closed system". Yet we know that some of the greatest challenges that confront us as a nation arise out of our role in the world community. Given the communication, transportation, and weaponry systems of the 1970's, there can be no doubt that today "No man (or nation) is an island, entire to itself." Interdependence, not scarcity, is indeed the basic fact of economic life. And in the world economy, life has not been easy for the Neurotic Trillionaire (i.e., the U. S. economy) in recent years. Witness the recurring dollar crises, gold losses, declining trade balance, persistent balance of payments deficits, and controversies over foreign economic aid, to name only a few of our international problems.

The International Balance of Payments. A good place to begin this brief overview of international economics is with a document called the international balance of payments: the record of all transactions (exports, imports, travel, services, investments, loans, gifts) between Americans and foreigners during the year that give rise to money payments. It is an accounting statement that always balances by definition: total receipts (credits) must equal total payments (debits). But how this balance comes about is a fascinating story of imported German VW's and Brazilian coffee; exported winter wheat and machine tools; General Motors investments in Japanese industry; U. S. Government military aid grants to South Viet Nam; and gold sales to Swiss bankers in exchange for U. S. dollars.

Table 4.7-1 is a simplified version of the "Revised Presentation" of the 1970 U. S. balance of payments as published by the U. S. Department of Commerce. Merchandise exports of $42.0 billion exceeded merchandise imports of $39.9 billion by slightly more than $2 billion, giving the U. S. a"favorable"Balance of Trade (surplus on merchandise account). Investment income of $6.2 billion added further to the surplus of receipts (credit items); but U. S. military spending abroad, travel and transportation expenditures, other services, transfers from Americans to people overseas, and U. S. government grants to foreigners (debit items) reduced the Balance on Current Account to less than half a billion dollars. Long-term and short-term capital outlays by private business and government exceeded foreign capital spending in the U. S. by $9.1 billion, which combined with Net Errors and Omissions of $1.1 billion to produce an overall deficit in the Balance of Payments amounting to $9.8 billion (Official Reserve Transactions Balance), or $3.9 billion (Net Liquidity Balance). Thus, in 1970 the U. S. spent more dollars for goods, services, and capital

Table 4.7-1. U. S. BALANCE OF PAYMENTS, 1970

	(+Credit and -Debit) billions of dollars		
I. CURRENT ACCOUNT			
Exports of goods and services			
Merchandise	+42.0		
Income on investments	+ 6.2		
Other services (freight, travel, etc.), net	+ 0.6	+48.8	
Imports of goods and services			
Merchandise	-39.9		
Military transactions, net	- 3.4		
Travel and transportation, net	- 2.0		
Remittances and pensions	- 1.4		
U. S. Government grants (excl. military)	- 1.7	-48.4	+0.4
II. CAPITAL ACCOUNT			
Private			
*Direct U. S. investments abroad	- 4.4		
*Other long term flows, net	+ 1.9		
*Foreign direct investment in U. S.	+ 1.0		
*Nonliquid short-term flows, net	- 0.5		
Liquid short-term flows, net	- 6.0		
Government			
*U. S. capital outflow, net	- 1.6		
U. S. nonliquid liabilities	- 0.4		
*Allocation of SDR's	+ 0.9		-9.1
III. *ERRORS & OMMISSIONS, net	- 1.1		-1.1
IV. OVERALL BALANCE			
Net liqidity basis	- 3.9		
Transactions basis	- 9.8		
V. BALANCING ITEMS			
Gold outflows	+ 0.8		
Other official reserve assets	+ 1.7		
Liquid liabilities to foreign official agencies (F.O.A.'s)	+ 7.6		
Nonliquid liabilities to F.O.A.'s, U. S. Government plus U. S. banks	+ 0.8		+9.8
Balance of Trade (Merchandise)	+ 2.1		
Balance on Goods and Services ($=X_n$ in NIA)	+ 3.6		
Balance on Goods, Services, and Remittances	+ 2.2		
*Balance on Current Account	+ 0.4		
Balance on Current Account and Long-term Capital	- 3.0		
Net Liquidity Balance (sum of items marked with *)	- 3.9		
Official Reserve Transactions Balance	- 9.8		

SOURCE: U. S. Department of Commerce, OBE 71-43, July 6, 1971

than it took in, making us debtors to the rest of the world. Account V shows how the deficit was financed: we turned over nearly $800 million in gold to foreigners, paid out $2.1 in convertible foreign currencies, and incurred net liabilities of $6.9 billion (mostly to foreign official agencies). Whether to use the transactions balance or the liquidity balance depends on the purpose of the analysis: if it is to measure the net exchange market pressure on the dollar during the year, the transactions balance is relevant. The liquidity balance (which excludes net flows of U. S. and fireign private liquid capital) is a better indicator of underlying trends.

Gold losses and payments deficits are nothing new to the U. S. economy: sales of gold to foreigners in the past 20 years (under our traditional policy of convertibility at the rate of $35 per ounce) reduced our supply of the metal from $23 billion to $10 billion; and we have incurred a balance of payments deficit on liquidity basis every year but two (1957 and 1968) during the same period. What is new, and worrisome, is our shrinking trade balance, "export" of jobs, and weakening of the dollar in international finance (leading to President Nixon's August 1971 "disvaluation", 10% surcharge on imports, and efforts to halt inflation).

Foreign trade and international finance are only two aspects of our relations with other nations. We face special challenges in our relations with the less developed countries (LDC's) and with the communist economies -- partly because of economics but also because of political considerations. No detailed discussion of foreign economic assistance or trade policies with the communist nations will be attempted here, but some trends and issues can be highlighted.

Starting from a pitifully low base of per capita income (below $500 per year, as compared with $5,000 for the U. S.) the LDC's are caught in a squeeze of rapid population growth (2.3% in Africa, 2.2% in Asia, 3.0% in Latin America -- compared with 1.1% in the U. S. and 0.7% in Europe) and severely limited resources available for productivity-increasing investments in physical and human capital. The outlook for overcoming poverty and generating a pattern of economic growth that will steadily raise levels of living over the years is bleak indeed. More likely is a continued widening of the gap between rich and poor nations and, unless population growth is checked, even deeper poverty and mass starvation for billions of people.

Ethical, economic, and political implications of the plight of the LDC's are fairly clear, yet the U. S. and other affluent nations have yet to devise an effective strategy for coping with the challenge. U. S. economic development assistance in the form of grants and loans has declined from $3.6 billion (0.6% of GNP) in 1963 to $3.2 billion (0.3% of GNP) in 1969. In a recent report covering 15 leading industrial nations (European, U. S., Canada, Japan, and Australia) only France was spending as much as 1% of its national income on foreign aid.

Ever since Nikita Kruschev uttered his famous challenge: "We will bury you!", Americans (and practically everybody else in the world) have

followed with keen interest the economic competition between the number one Capitalist Power and the leading Communist Power. Between 1928 and 1958, the U.S.S.R. economy grew at an annual rate of 4.4% in terms of total GNP and 3.7% on a per capita basis. Corresponding figures for the U. S. were 2.9% and 2.0%. By 1970, the Soviet economy was producing perhaps $500 billion of goods and services, or half the level of U. S. output. (It is more difficult to compare levels of income than rates of change. As one noted economist writes--with tongue in cheek?--"Today we know many facts about the Russian economy [including the fact that Soviet GNP is] between two-thirds and one-third of ours in size"--which translates into a $340 billion range of error!)

A few years ago, before the erratic growth experience of the 1960's, it was fashionable to speculate on when the Russians would surpass the Americans in total GNP. Estimates varied from the 1980's to never. Now both nations are looking over their shoulders at fast-growing Japan (which in the Sixties became the world's third largest economy) and her Asian neighbor, Red China, which has the resource potential to become the world's biggest economy within our lifetimes.

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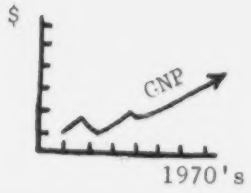
4.8 -- WILL ECONOMIC GROWTH SOLVE ALL OUR PROBLEMS?



Economic growth is the steady increase of Gross National Product per person, year after year. It means more output of goods and services and therefore increased real income available for the people in our economy. If our recent growth rate of 2½% a year (increased GNP per person) continues, incomes will double every 28 years. Will this growth of production and income solve our economic problems?

* * * * * * * * *

We have noted that every economic system faces three basic problems and must somehow find answers to the three fundamental economic questions:

1 -- HOW MUCH will be produced? (What will be the overall level of economic activity and GNP?)

2 -- WHAT will be produced? (What specific kinds of goods and services will be produced? What will be the composition of our GNP?)

3 -- FOR WHOM will the income be produced? (How will we share our production among the various members of society? What will be the distribution of our nation's income?)

The specific goals we establish for our economy serve as targets to aim for in solving the basic problems. These specific goals include Full Production, Stable Economic Growth, Freedom of Choice, Equality of Opportunity, Economic Security, and Economic Justice. In addition -- because we are part of the world economy and "the world community of man" -- we also have certain problems and goals that concern our relations with other countries, which we acknowledge with the goal of International Balance.

* * *

Between 1929 and 1959, Gross National Product of the United States grew from $204 billion to $476 billion (in constant 1958 prices). During

the 10-year period from 1959 to 1969, total GNP increased from $476 billion to $727 billion (again in constant 1958 prices). Real GNP per person rose from $2,700 in 1959 to $3,400 -- an average increase of about 2½% a year. By 1971, total GNP (in current prices) will approximate one trillion dollars! Economic growth enlarges the income pie and makes it possible for every American to have more dollars, more goods and services, more savings. A few years ago, it was estimated that GNP per person in the United States ($3,000) was 30 times as high as GNP per person in the underdeveloped countries of Africa and Asia ($100 per year) and nearly 10 times as high as the average income in Latin America ($330 income per person a year).

The central question we want to raise in this discussion is this: If we achieve the goal of Economic Growth -- at full employment, without inflation -- will this mean that our other goals also will be achieved, more or less automatically? Will growth solve all our problems? Before answering, let's consider a partial list of specific economic problems or threats currently facing the United States:

Poverty
War (hot and cold)
Racial Discrimination
Overpopulation
Pollution of the Environment
Physical & Mental Illness
Monopoly Power (Business)
Unemployment
Monopoly Power (Labor Unions)
Inflation
Civil Disorder
High Taxes
Crime
Government Controls
City Slums
Gold Losses
Communism
Fascism
Automation

An interesting and provocative exercise is to identify the problems you personally think are most serious, and then consider what makes them economic problems, and what makes them serious problems? Consider also how economic growth might be expected to help solve many of these problems.

First of all, growth means that more goods and services are available to satisfy consumer wants, more resources are available for investment (in machinery and equipment as well as in human resources), and more wherewithal exists for government to provide social services (such as education, highways, military defense, and conserving our natural resources). Economic growth increases our power and our range of choice. For example, one reason why both the United States and the Soviet Union assign priority to economic growth is because growth allows a country to strengthen its military defense (and meet or beat the competition in the space race) as well as to provide a better standard of living for its people. A rich country has more control over its present and its future well-being than a poor country, just as a rich man has more control over the world he lives in, than a poor man has.

* * *

But does economic growth solve all our problems? You can answer this question for yourself. The record shows that our economy has grown in the past -- yet many problems remain, such as poverty, inflation, and war. Economic growth in the future may very well help us to solve some of our remaining problems, but evidently growth alone does not automatically cure all of our ills.

We can illustrate this very briefly by looking again at the three basic questions every economy must answer:

Question #1 -- the OVERALL LEVEL of economic activity: In spite of the fact that we enjoyed rapid growth in the U. S. economy in the late 1960's, the problems of inflation and unemployment were not solved. The general level of prices (Consumer Price Index) rose more than 4% annually, on the average between 1965 and 1969, which meant that the purchasing power of the dollar went down because of inflation. And even as the economy approached "full employment", hundreds of thousands of women, young workers, the unskilled, displaced older workers, and those with limited schooling were jobless.

Question #2 -- the COMPOSITION of production: In 1969, when GNP was $931 billion, approximately one-twelfth of this total was for national defense and not available for personal consumption or business investment. (We spent more money and resources on war and defense in 1969 than we spent on the education of all 60 million students enrolled in American schools and colleges that year.)

Question #3 -- the DISTRIBUTION of income: Although we were producing enough goods and services in total to provide more than $10,000 of income for each family in the United States, the fact is that over 20 million Americans were living in poverty (i.e., they had family income from all sources below $3,600 for the year). Some 10 million American children under the age of 18 were growing up in these poor families. While the 10 million families at the low end of the American income scale had to subsist on only 5% of the nation's income, the 10 million families at the high end of the scale were receiving more than 40% of the country's income (after taxes).

And to add a final dismal note after our rapid economic growth and record-breaking prosperity of the Sixties, we live in a world threatened by nuclear war, environmental pollution, population explosion, and growing resentment over the widening gap between the rich nations and the poor nations.

The economic outlook for the future may seem dismal or bright, depending on your "world-view". Two facts stand out, however: First, that knowledge is expanding rapidly -- men and women are acquiring skills and tools that make them the most productive human resources in history. And second, knowledge is power. History shows that the growing productive

power of man can be used wisely or foolishly, constructively or destructively, whatever men choose and allow, and that the most important economic problem in any age, as Stanford's Professor M. Abramovitz writes, is "to know what we want, to define useful and worthy ends, and to balance our efforts among them in due proportion."

It may be true, as some have argued, that economic abundance is a necessary condition for socio-economic well-being of the mass of people. Current experience suggests, however, that affluence is not the sufficient condition for a high and improving quality of life. If we are to solve the socio-economic problems of poverty, pollution, power, population, and the rest, it seems clear that massive doses of individual concern, social creativity, institutional renewal, and human will are all required.

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4.9 -- VALUES AND A WORLD-VIEW FOR A CHANGING WORLD

"The future belongs to those who prepare for it."
-- Anonymous

"Economic decisions are man-made decisions. We are to a considerable extent masters of our own economic destinies."
-- President John F. Kennedy

VALUES are standards that people use in making choices and decisions about important matters. A value judgment implies goodness or badness. Values are conditioned by the particular WORLD-VIEW held by individuals and entire societies. In a society characterized by rapid technological change and continuing institutional adjustment, a futuristically-oriented world-view and value system is most likely to help people prepare for the future and shape their own social and economic destiny.

* * * * * * * * *

The following discussion is frankly "philosophical". (The word philosophy literally means the "love of wisdom" and refers to the study of knowledge.) Most people have a "philosophy of life" that includes their beliefs about the meaning of life and what things are most important in their own lives. We should not be surprised to find that economics is concerned with philosophical issues: most professional economists have earned a university degree called "Doctor of Philosophy" (Ph.D.); and Adam Smith, the "father of economics" was a moral philosopher in Scotland before he became interested in economic science. Twenty years before publishing his famous book, The Wealth of Nations, in 1776, Professor Smith wrote a book on virtue and ethics entitled The Theory of Moral Sentiments.

To begin with, let's explore some ideas concerning an individual's world-view (the way he looks at the world and interprets what he sees), with special emphasis on the subject of change. We'll start with a story about a cow.

"The Shafter Cow"

> At exactly 5:13 a.m. on the 18th of April, 1906, a cow was standing at 123-degrees, 20-minutes West longitude, 37-degrees, 58-minutes North latitude -- somewhere between the main barn and the milking shed on the old Shafter Ranch in California, minding her own business. Suddenly, the earth shook, the skies trembled, and when it was all over, there was nothing showing of the cow above ground but a bit of her tail sticking up.
>
> For the student of change, the Shafter cow is a sort of symbol of our times. She stood quietly, thinking such gentle thoughts as cows are likely to have, while huge forces beyond her understanding built up all around her -- and, within a minute, destroyed a city and swallowed her up. (From "Kaiser Aluminum News", 1966.)

* * *

How does the typical American view the process of economic change? Is he aware of "huge forces" building up around us, simultaneously threatening (or promising) to destroy our old world -- and create something new? Does he feel that anything can be done about it? The following excerpt with a few changes comes from a book entitled Economics and Man:

> In economics, the general view that you have of the whole economic system is the most important element of your economic thought. If you think the tendency to bargain and trade is "original human nature"; if you think that the rational search for pleasure and the avoidance of work and pain are the mainsprings of human action; if you think that the market determines the natural and just way of distributing income; then you have one view of the economic world, and this view may affect your beliefs about how to run the government (what anti-inflation policies to follow, and how to conduct a war against poverty).

If, however, you have different ideas -- that capitalism is a growing, changing institution that has developed out of former ways of organizing production; that man's actions are only partly rational; that the things we consume (and the work we do) are dictated by our institutions rather than by our rational search for pleasure -- then you have a quite different world-view, and this may affect your attitudes toward economic change and how to solve particular economic problems.

* * *

Just as nobody can know for sure exactly what the future will bring, neither can anyone prescribe exactly what the "correct" world-view is for modern man. This is a matter of personal philosophy that develops and grows as we learn more about the world and man's place in it. But certain ideas may prove helpful in searching for a useful or functional world-view, based on some facts that we have learned about man and the world he lives in.

For example, we can look into the future and predict with a great deal of confidence that life in the year 2000 will be different from life in 1970. The work that men and women do, the goods and services they consume, the methods of production, the nature (and quality?) of the socio-economic environment will all be vastly different. Moreover, since the rate of change in technology and economic life seems to increase each year, we can expect life 30 years from now to be much different -- with changes even greater than those which occurred between 1940 and 1970. The people who do not anticipate massive changes, who can't adjust to a changing environment, and who can't cope with the new world in which they live -- these people are more likely to suffer from change rather than benefit. They are the ones for whom it is unhappily true that "fear of the future gives opportunity the face of disaster".

* * *

Now let's focus attention squarely, if only briefly, on the subject of "values". Whenever people talk about something as being good or bad -- e.g., a program to halt inflation, reduce poverty, increase job opportunities, end the war; or social institutions such as private property and the laws of inheritance -- they are expressing value judgments. These judgments are based on values, which we may define as "criteria of choice" -- standards, guidelines, or norms that people used in arriving at decisions of real importance. Examples of values that appear to rank high in the value systems of many Americans are: truthtelling, efficiency, equality of opportunity, human development, freedom, preservation of human life. A value judgment consciously or unconsciously implies a preference based on one or more particular value criteria.

Values are important in economics because, as we suggested in the preceding section, they help us identify what it is that we want to achieve with the resources, technology, and institutions available to us. Values help us to define useful and worthy ends, and, indeed, useful and worthy means for achieving those ends. All economic policies are based on values. All consumer decisions are reflections of consumer values. Actions by business firms, labor unions, and government agencies all are based on values -- notions of what is good or bad for people -- though the values themselves may not always be stated explicitly.

The practical meaning of all this is that economics is concerned not only with "means" (i.e., how to achieve given objectives such as full employment, price stability, maximum profits, etc.) but also with "ends" (i.e., the goals of economic and social activity). Learning the economic principles of how-to-do-it is only part of the task of economic understanding; the other part is knowing the principles of what-to-do. The principles of efficiency, as a matter of fact, have been fairly well developed in economic science. The principles of value -- the ones that largely determine the quality of life in an affluent society -- unfortunately remain in a rudimentary stage of development. Nevertheless, the discipline of social economics does have some contributions to make to "knowing the good". Following are some suggestions that may be helpful in pursuing a rational approach to valuing:

First: Keep an OPEN MIND. Don't be "pig-headed". Even if you are "certain" that you are right, consider that you might possibly be wrong. (Here is a rule you might follow: "A value judgment is as good as the reasons for it, and as weak as the reasons that support alternative views.")

Second: Try to CLARIFY THE ISSUES to find out exactly what it is that you disagree on. Don't be "muddle-headed". (Frequently, after much arguing and confusion, it turns out that there is not much disagreement after all, only misunderstanding.)

Third: Look at the FACTS, and check the accuracy of your own information and data. (Many so-called value disputes are really disagreements about the facts. Once the factual errors are eliminated, the dispute is ended.)

Fourth: Check to be sure your LOGIC is sound and your values are consistent. (For example, in George Orwell's famous book, Animal Farm, all the animals were in favor of equality, but some animals wanted to be "more equal" than others.)

Fifth: Be sure that you APPLY your values to the methods used to achieve your goals as well as to the selection of the goals themselves. (For example, if your goal is to teach a group of people how democracy works, but you order everyone around like a dictator, you fail to follow your value of democratic procedure.)

* * *

The concepts and principles of economics can be very useful in making wise choices. Being able to apply the tools of Theory, History, and Statistics within the decisionmaking procedure of Defining the Problem, Identifying Goals, Considering Alternative Solutions, Analyzing Probable Consequences of Alternatives, can result in qualitatively superior Choices. Progressing from lower levels of knowledge to higher levels, in economics as well as other fields, can help individuals and society recognize not only what is and what can be, but also lead them to a more enlightened appreciation of what should be.

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SUMMARY. Technological progress makes it possible to produce more, new, and better goods and services. Not only does technological advance stimulate growth in productivity and GNP, it also exerts a powerful and pervasive influence on our entire way of life. The National Commission on Technology, Automation, and Economic Progress has called on the American people, in the decades ahead, "to direct technology to the fulfillment of important human purposes" including finding ways "to make work more meaningful rather than merely more productive". Some people claim that automation and cybernation (and other new technological processes) will eliminate so many jobs that mass unemployment will result. Economic theory and recent experience suggest that there will be enough jobs in the economy, at least for the next two or three decades, to assure employment opportunities for virtually everyone who is able and willing to work. A rising level of market demand, expanding human wants, and growth of the service sector of the economy all combine to offset the job-reducing effects of automation. General unemployment will continue to be a problem, however, whenever the level of aggregate demand is deficient. Unemployment also results from frictional, seasonal, and structural factors. The costs of unemployment include wasted resources and foregone production, lost earnings, and a host of social and psychological problems. The burdens of joblessness fall most heavily on workers who are nonwhite, unskilled, young, school dropouts, and women. Policies designed to promote full employment (e.g., expansionary fiscal and monetary actions aimed at raising the level of consumer, investment, and government spending) sometimes conflict with the goal of reasonable price stability. Because the costs of inflation are also burdensome, government faces a "tradeoff" dilemma in carrying out its economic stabilization policies.

One of the most tragic shortcomings of the U. S. economy is its failure to eliminate poverty. Despite our enormous trillion-dollar annual output of goods and services, some 25 million Americans remain poor, with incomes below official standards centering around $4,000 per year for a 4-person family. The 10 million families at the top of the income scale receive eight times as much income every year as the 10 million families at the bottom. Redistribution of only 1% of our GNP would completely close the poverty-income gap for everyone in the nation, yet 10 million American children are growing up in poverty and one Black American in every three is poor. Strategies for achieving our announced

goal of poverty elimination range from better manpower programs to some form of guaranteed minimum income that is independent of the ownership of property or dependence on the job market.

Although this Primer is concerned primarily with domestic economic issues, the challenge of international economic relations must not be overlooked. Persistent balance of payments deficits, a growing gap between the rich nations of the world and the poor, and economic competition with communist nations are among the problems that we face in the world community.

Many Americans--including businessmen, political leaders, and others--have held a kind of faith that economic growth will more or less automatically solve such problems as poverty, unemployment, inflation, international imbalances, automation, and the like. Experience shows, however, that while growth increases our income, resources, and economic power, nevertheless affluence has not eliminated the problems listed above and in fact tends to create certain other problems, such as pollution of the environment. Social policies must be formulated to assure that our expanding economic power is directed toward "useful and worth ends" that will enhance economic well-being and the quality of life. This requires that people who are concerned about socio-economic life become sensitive to the value dimensions of economic activity and strive to improve their understanding not only of "how to do it" but also "what to do."

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